SHARP

SERVICE MANUAL

No S88T1LC42SB45

LCD COLOUR TELEVISION

MODEL LC-42SB45U

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

CONTENTS

Parts marked with ⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

SAFETY PRECAUTION

IMPORTANT SERVICE SAFETY PRECAUTION

■ Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:

■ WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.

CAUTION:
FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE REPLACE ONLY WITH SAME TYPE FUSE.
F7000 (6.3A/250V)

■ BEFORE RETURNING THE RECEIVER (Fire & Shock Hazard)

Before returning the receiver to the user, perform the following safety checks:

3. Inspect all lead dress to make certain that leads are not pinched, and check that hardware is not lodged between the chassis and other metal parts in the receiver.
4. Inspect all protective devices such as non-metallic control knobs, insulation materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
5. To be sure that no shock hazard exists, check for leakage current in the following manner.

• Plug the AC cord directly into a 220~240 volt AC outlet.

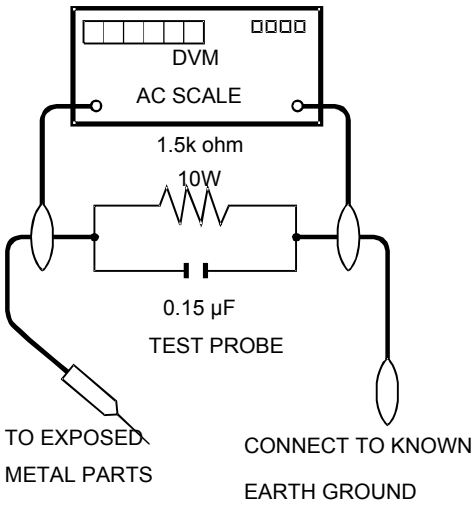
• Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15μF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to an earth ground.

• Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity or measure the AC voltage drop across the resistor.

• Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.

All checks must be repeated with the AC cord plug connection reversed. (If necessary, a nonpolarized adaptor plug must be used only for the purpose of completing these checks.)

Any reading of 1.05 V peak (this corresponds to 0.7 mA peak AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the monitor to the owner.



SAFETY NOTICE

Many electrical and mechanical parts in LCD color television have special safety-related characteristics.

These characteristics are often not evident from visual inspection, nor

can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠ and shaded areas in the Replacement Parts List and Schematic Diagrams.

For continued protection, replacement parts must be identical to those used in the original circuit.

The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire or other hazards.

Precautions for using lead-free solder

Employing lead-free solder

• "PWBs" of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWBs and service manuals.
The alphabetical character following LF shows the type of lead-free solder.
Example

Indicates lead-free solder of tin, silver and copper.

Indicates lead-free solder of tin, silver and copper.

■ Using lead-free wire solder

• When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.
As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40 °C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldering bit, contact our service station or service branch in your area.

Soldering

• As the melting point of lead-free solder (Sn-Ag-Cu) is about 220 °C which is higher than the conventional lead solder by 40 °C, and as it has poor solder wettability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, Since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.
Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded. Make sure to turn on and off the power of the bit as required.
If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.
When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

• Be careful when replacing parts with polarity indication on the PWB silk.

Lead-free wire solder for servicing

Part No.	★	Description	Code
ZHNDAi123250E	J	ϕ0.3mm 250g (1roll)	BL
ZHNDAi126500E	J	ϕ0.6mm 500g (1roll)	BK
ZHNDAi12801KE	J	ϕ1.0mm 1kg (1roll)	BM

CHAPTER 1. OPERATION MANUAL

[1] SPECIFICATIONS

Specification

Item			Model:LC-42SB45U
LCD panel			a-si TFT LCD 42" Class
Resolution			2,073,600 pixels(1,920x1,080)
TV Function	TV-standard(CCIR)		American TV standard ATSC/NTSC System
	Receiving Channel	VHF/UHF	VHF 2-13ch,UHF 14-69ch
		CATV	1-135ch(non-scrambled channel only)
		Digital terrestrial Broadcast(8VSB)	2-69ch
		Digital cable (64/256QAM)	1-135ch(non-scrambled channel only)
	Audio multiplex		BTSC System
Backlight			60,000 hours(at Backlight standard position)
Audio out			10Wx2
Terminals	Rear	INPUT 1	COMPONENT in,AUDIO in
		INPUT 2	COMPONENT in,AUDIO in
		INPUT 4	HDMI in with HDCP
		INPUT 5	HDMI in with HDCP,Audio on(3.5mm jack)
		INPUT 7	15-pin mini D-sub femal connector,Audio in(3.5mmjack)
		ANT/CABLE	75 Unbalance,F Type x1 for Analog(VHF/UHF/CATV) and (AIR/CABLE)
		DIGITAL AUDIO OUTPUT	Digital audio output x1(PCM/DOLBY Digital)
	Side	INPUT 3	AV in,S-VIDEO in
		INPUT 6	HDMI in with HDCP
		SERVICE	Software update
OSD language			English/French/Spanish
Power requirement			AC 120V,60Hz(For North America) AC 110~240V,50-60Hz(For Others)
Power Consumption			220W(0.7W Standby with AC 120V)
Weight	TV+stand		48.72 lbs/22.1 kg
	TV only		43.8 lbs/19.87 kg
Dimension (W xH xD)	TV+stand		39.75x27.75x10.75 inch
	TV only		39.75x27.62x3.88 inch
Operating temerature			+32°F to +104°F(0°C to +40°C)

- As a part of policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

Optional accessory

The listed optional accessories are available for the LCD colour TVs. Please purchase them at your nearest shop,

- Additional optional accessories may be available in the near future. When purchasing, please read the newest catalogue for compatibility and check the availability.

No.	Part name	Part number
1	Wall mount bracket	AN-52AG4

[2] OPERATION MANUAL

Remote control unit

POWER: Press to turn on/off the TV from on to standby mode, or inversely

DISPLAY: Press to display information about the selected TV channel (Channel banner)

INPUT: 1. Press repeatedly to select the signal source:
2. The Input List should be activated and show on OSD.

MUTE : Interrupt the sound or restore it.

Number Key: 1. Press number button to direct access to TV channel
2. Press the pass code to activate the factory mode
3. Press to activate the Channel Lock (enter PIN code for Channel lock)
4. If channel list OSD active – jump to that channel in the channel list (not tune the channel until OK is pressed)

- Dot key: Used for the digital channels

ENT: Used for accepting the key-in channel number

VOL +/ -: Press to adjust the volume

CH +/ - : 1. Press to browse channels
2. Press to turn on TV from stand by mode
3. The channel number should appear on the set

FREEZE : Frozen the current display

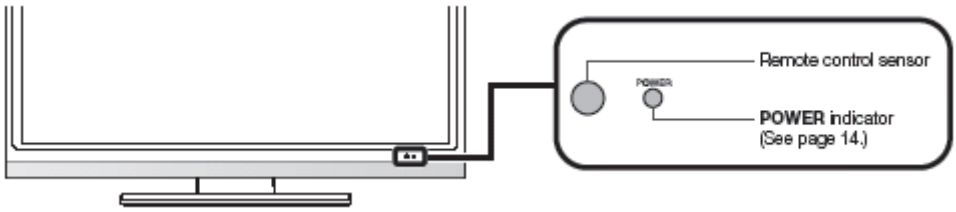
SURROUND : change audio mode (Mono/Stereo/Surround)

PLASHBACK: Press to alternate between the currently viewed program and previously viewed program (It should return to previous view if it comes from different signal source)

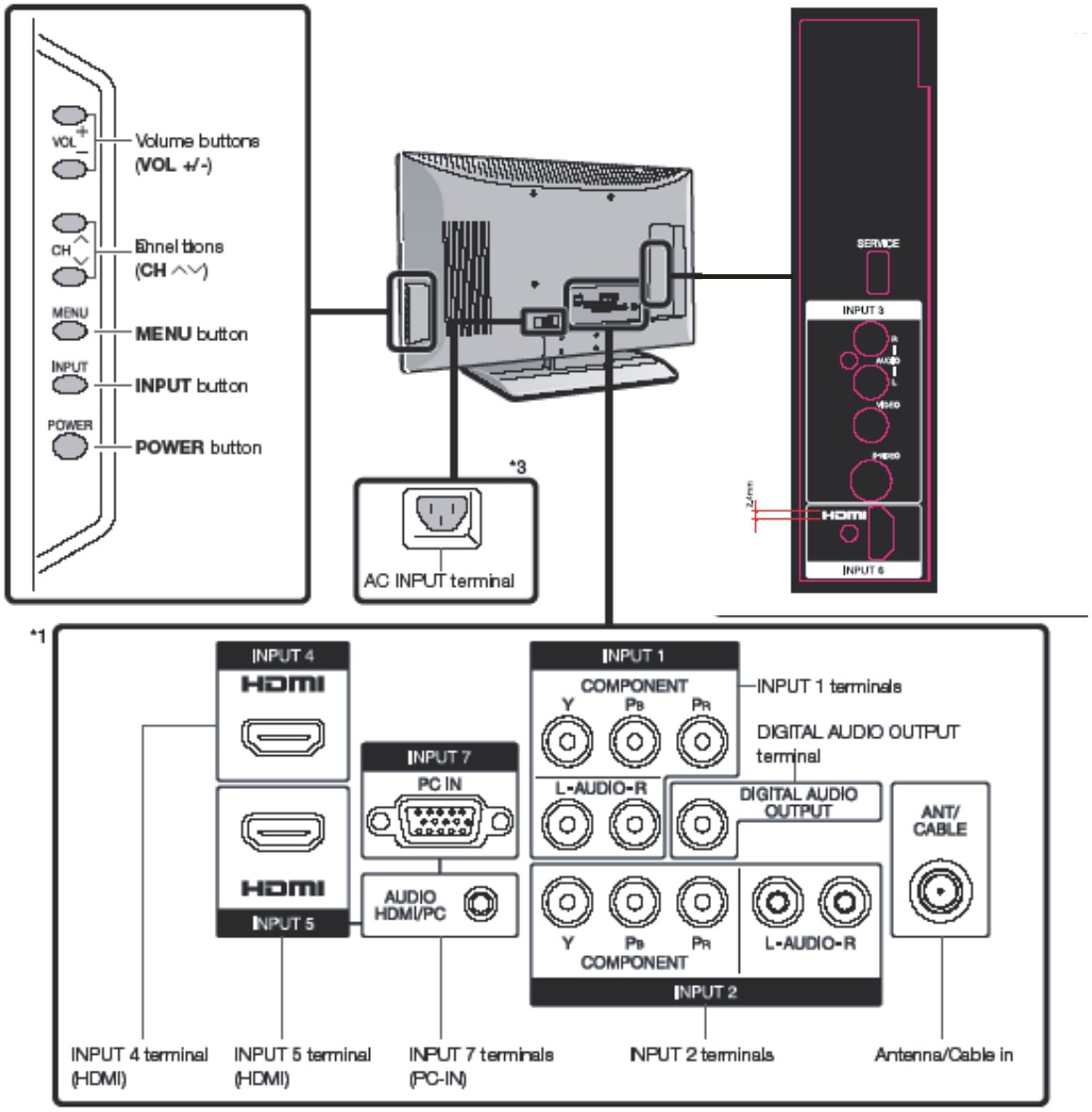
SLEEP: Press to show the sleep-timer slider in the right side of screen. Press displays current, subsequent presses advance (Loops)

MENU: Press to activate OSD menu or exit OSD

TV (Front view)

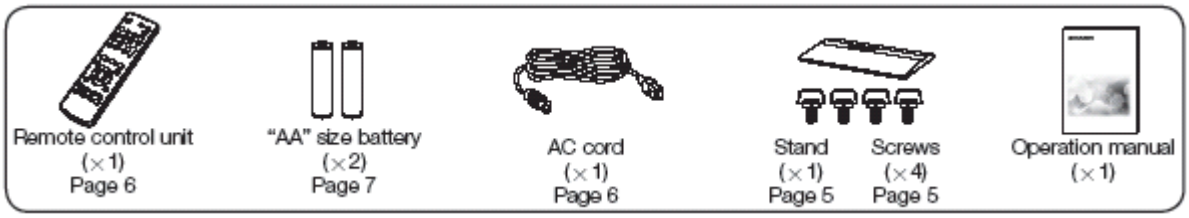


TV (Rear view)



Preparation

Supplied accessories



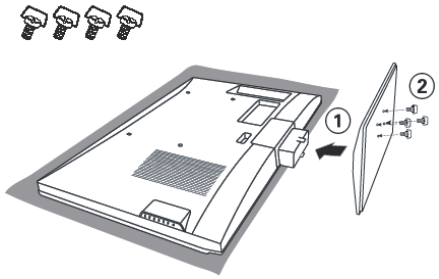
Note：

1. Always use the AC cord supplied with the TV.
2. AC cord enclosed in this product is for 110-125V.In using it on the 125-240V AC,pls consult the following:

SHARP ELECTRONICS CORPORATION,LATIN AMERICA GROUP 6100 BLUE LAGOON DRIVE,SUITE 150,MIAMI,FLORIDA 33126,U.S.A

Attaching/Detaching the TV Stand

1. Confirm that there are 4 screws supplied with the stand unit
2. ①Insert the stand into the openings on the buttom of the TV
   ②2Insert and tighten the 4 screws into the 4 holes on the buttom of the TV.



Note:

To detach the stand,perform the steps in reverse order

Detaching the stand neck for Wall mounting

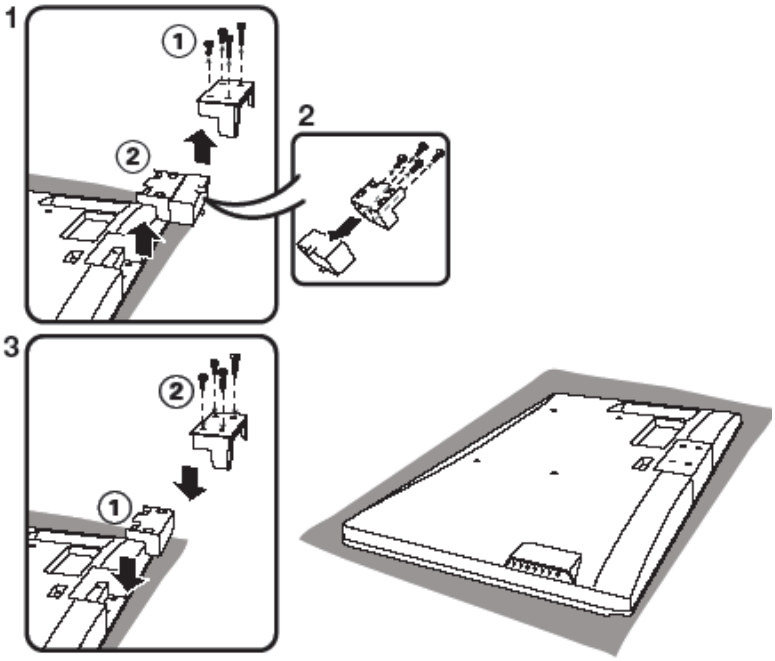
1. ①Loosen the 4 screws that secure the stand neck by using a cross-head screwdriver

②Remove stand neck from the TV set.

2. Loosen the 4 screws and pull out hinge plate

3. ①Place the hinge plate in the TV set as illustration shown

②Place the stand cover in the TV set and tighten the 4 screws Into the 4 holes

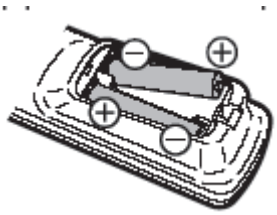


installation of batteries in the Remote Control Unit

If the remote control fail to operate TV functions,replace the batteries in the remote control unit

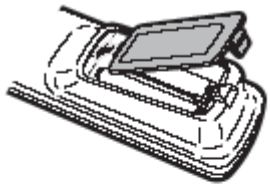
1. Open the battery cover .

2. Inser t two “AA “ size batteries (supplied with the product)



.Place the batteries with their terminals Corresponding to the (+) and (-) Indications in the battery compartment

3. Close the battery cover



CAUTUION

Improper use of batteries can result in chemical leakage or explosion. Be sure to follow the instructions below.

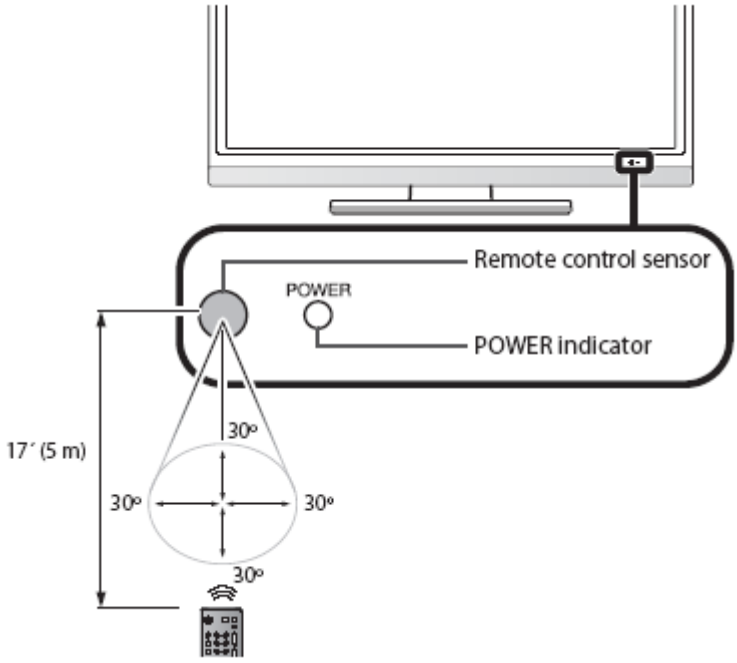
t characteristics.

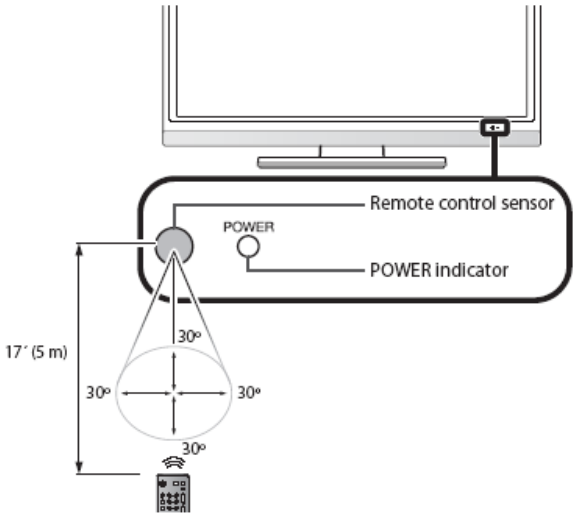
life of new batteries or cause chemical leakage in old batteries.

ies that come in contact with skin can cause a rash. If you find

storage conditions.

ve batteries from it.





Appendix

troubleshooting

Problem	possible Solution
No power	1. Check if you pressed POWER on the remote control unit If the indicator On the TV does not light up,pressPOWER on the TV. 2. Is the AC cord disconnected? 3. Has the power been turned on? 4.
Unit cannot be operated	External influence such as lighting ,static electricity,may cause improper Operation.In this case,operate the unit after first turning off the power off the TV or unplugging the AC cord and replugging it in after 1 or 2 minutes.
Remote control unit does no operate	1. Is the FUNCTIOn set correctly? Set it to the TV setting position 2. Are batteries inserted with polarity(+,-) aligned? 3. Are batteries worn out ?(replace with new batteries) 4. Is a fluorescent light illuminated near the remote control sensor? 5.
Picture is cut off/with sidebar screen	Are screen mode adjustments such as picture size made correctly?
Strange color,light color,or color misalignment	1. Adjust the picture tone 2. Is the room too right?The picture may look clark in a room that is Too bright 3. Check the input signal setting 4.
Powe r is suddenly turned off	1. Is the sleeptimer set? 2. The unit's internal temperature has increased.Remove any objects Blocking vent or cleen
No picture	1. Is connection to other components correct? 2. Is correct input signal source selected after connection? 3. Is the correct input selected? 4. Is picture adjustment correct? 5.
No sound	1. Is the volume too low? 2. Have you pressed MUTE on the remote control unit? 3.
The TV cometimes makes a creacking sound	This is not a malfunction.This happens when the cabinet slightly expands and contracts according to change in temperature.This does not affect the TV's performance

Cautions regarding use in high and low temperature environments

- When the unit is used in a low temperature space (e.g. room, office), the picture may leave trails or appear slightly delayed. This is not a malfunction, and the unit will recover when the temperature returns to normal.
- Do not leave the unit in a hot or cold location. Also, do not leave the unit in a location exposed to direct sunlight or near a heater, as this may cause the cabinet to deform and the LCD panel to malfunction.
- Storage temperature: +5°C to +35°C.

information on the software license for this product

Software composition

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obtaining source code

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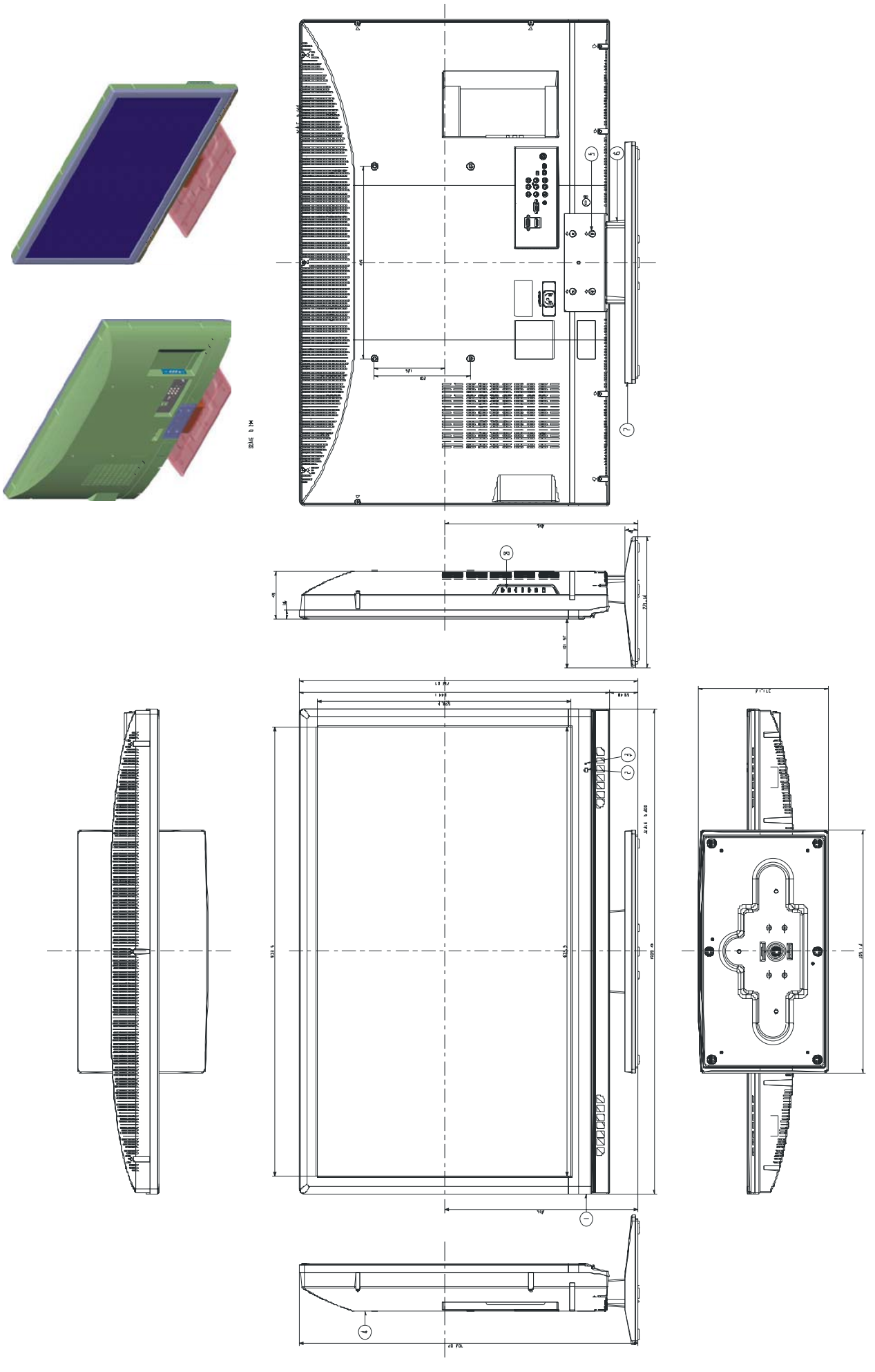
http://www.sharp-eu.com/gpl/

We are unable to answer any questions about the source code for the open source software. The source code for the software components whose copyrights are held by SHARP is not distributed.

acknowledgements

The following open source software components are included in this product:
•linuxkernel•modutils•glibc•zlib•libpng

[3] DIMENSIONS



CHAPTER 2. REMOVING OF MAJOR

PARTS

[1] REMOVING OF MAJOR PARTS

1. Assy/Panel removal

Note :Please put your mechine on soft material to avoid to scrape panel when disassembly

Front View

Fig.1

Back View

Fig.2

Step 1.Remove the base assy

A, Remove 4screws as fig 3 and put out the base.

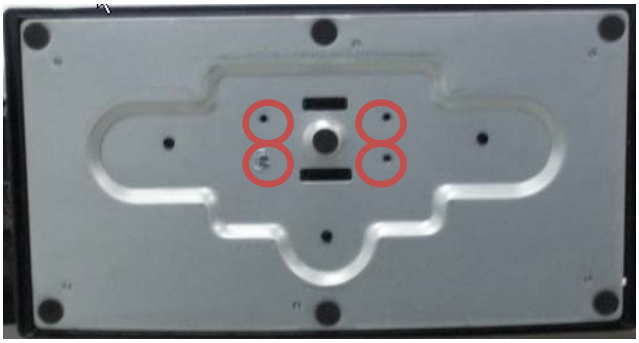


Fig 3

B.Remove 4 screws as Fig 4 to detach the base stand.

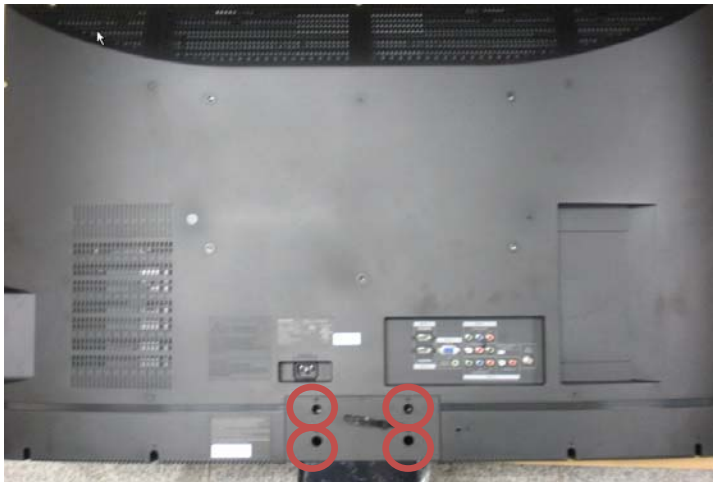


Fig 4

Step 2.Remove the Back cover assy.
Remove 15 screws as Fig 5.

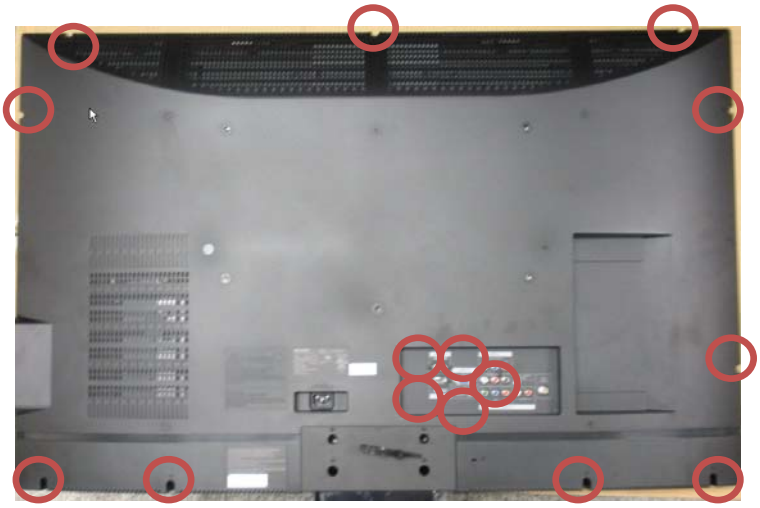


Fig 5

Step3.Remove the Power board.
Remove 5 screws and unplug 3 cables as Fig 6

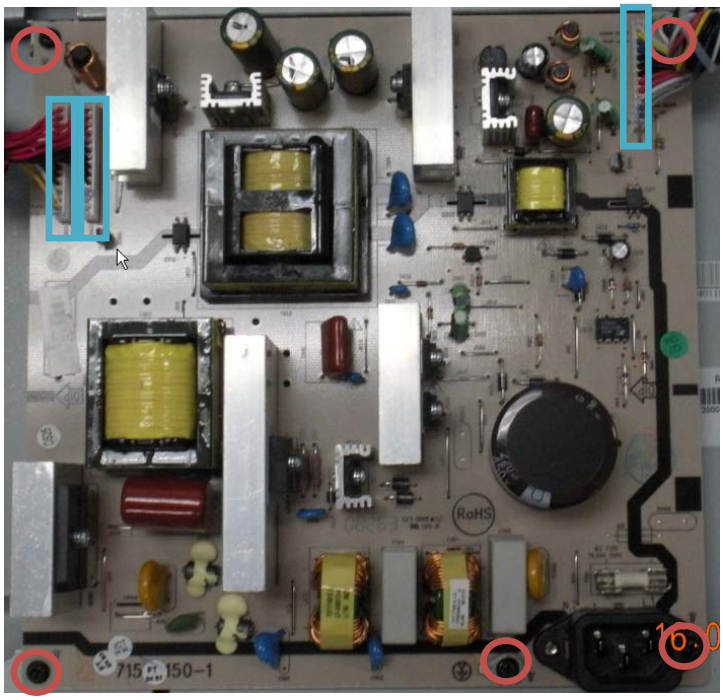


Fig.6

Step 4.Remove the Scaler bard.

Remove 4 screws and unplug 6 cables as Fig.7

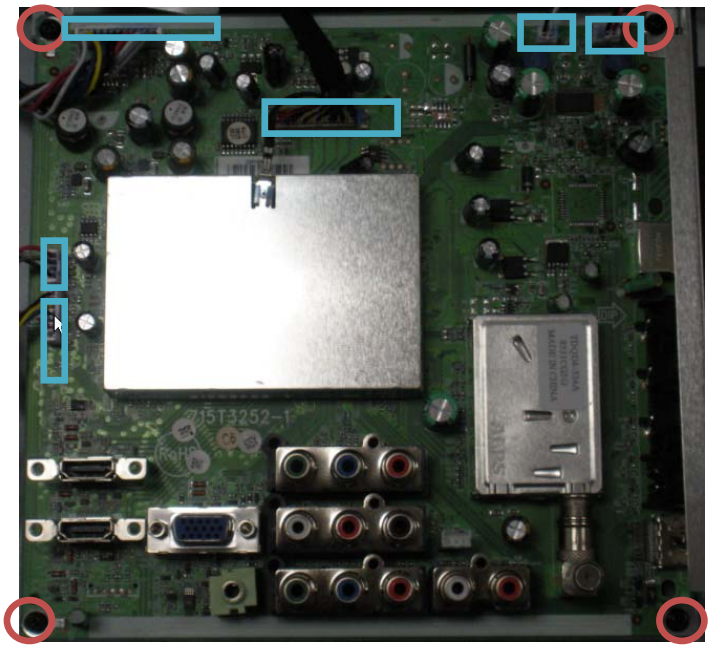


Fig 7

Step 5. Remove the Speaker(L/R)

Remove 4 screws as Fig 8 and Fig 9

Fig 8

Fig 9

Step 6. Remove the IR board

Remvoe 1 screws and unplug 1 cable as Fig 10

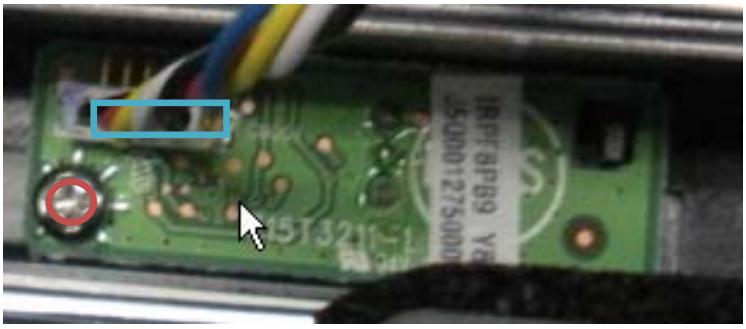


Fig 10

Step 7. Remove the Key board.

Unplug 1 cable as Fig 11

Fig 11

Step 8.Remove the matel frame.
Remove 16 screws as Fig 12

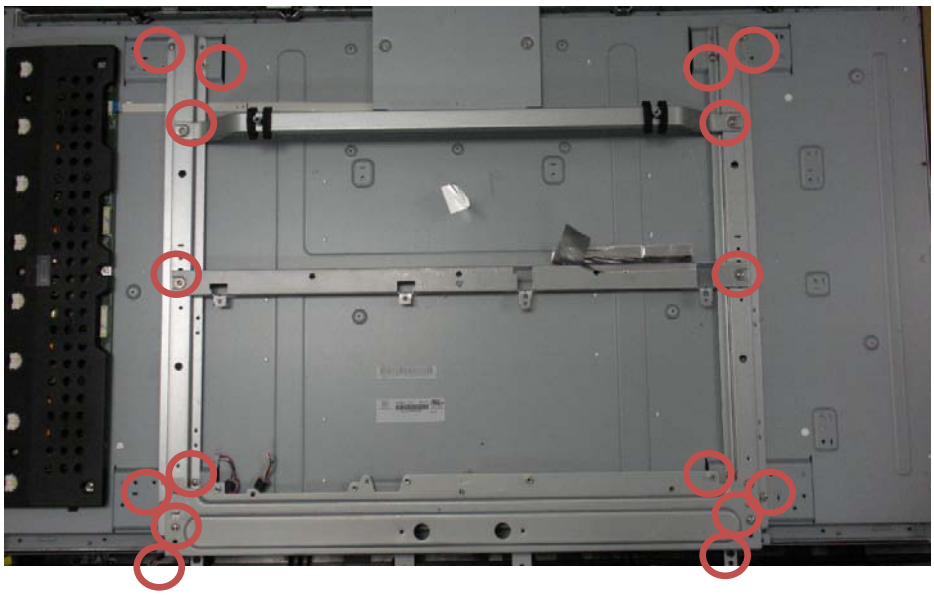


Fig 12

Step 9. Remvoe the Front cover assy.
Remove 6 screws as Fig 13

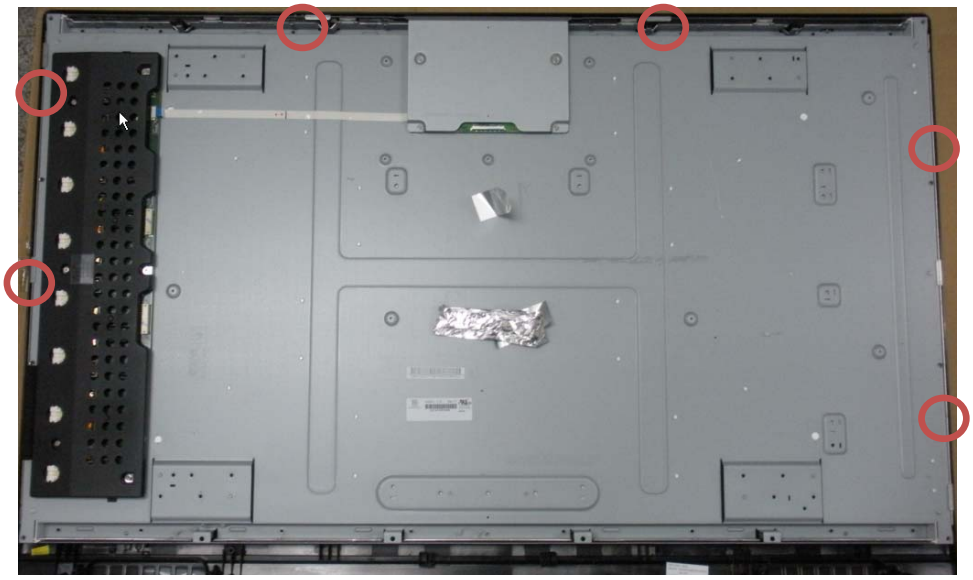


Fig 13

Step 10.Panel picture

The panel Picture as Fig 14

Fig 14

2. Set Re-assembly

To re-assemble the whole set, execute all processes in reverse order.

Notes:

a. While re-assembling, make sure that all cables are placed and connected in their original position.

b. Pay special attention not to damage the EMC foams at the SSB shielding. Check that EMC foams are put correctly on their places.

CHAPTER 3. ADJUSTMENT PROCEDURE

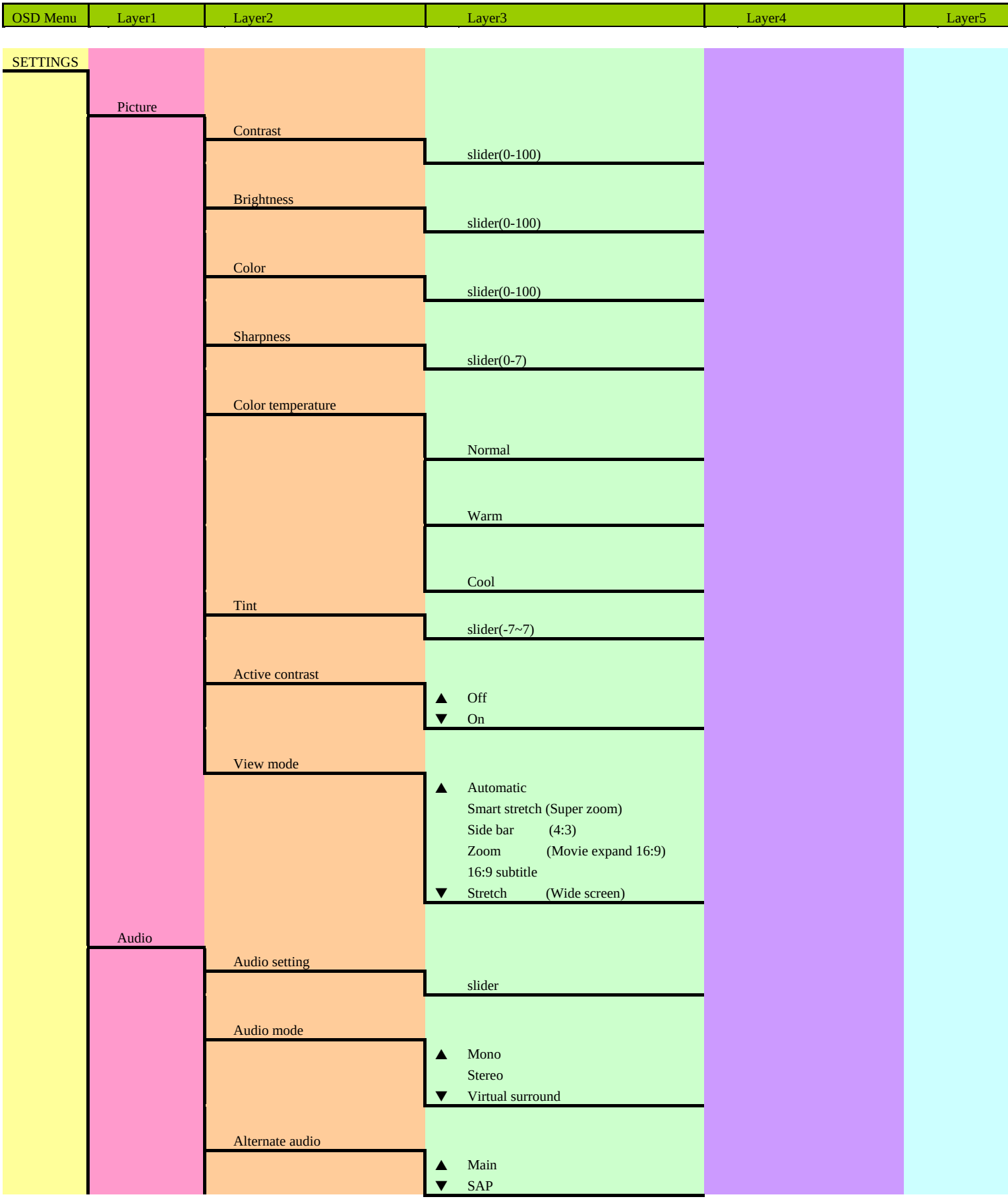
PROCEDURE

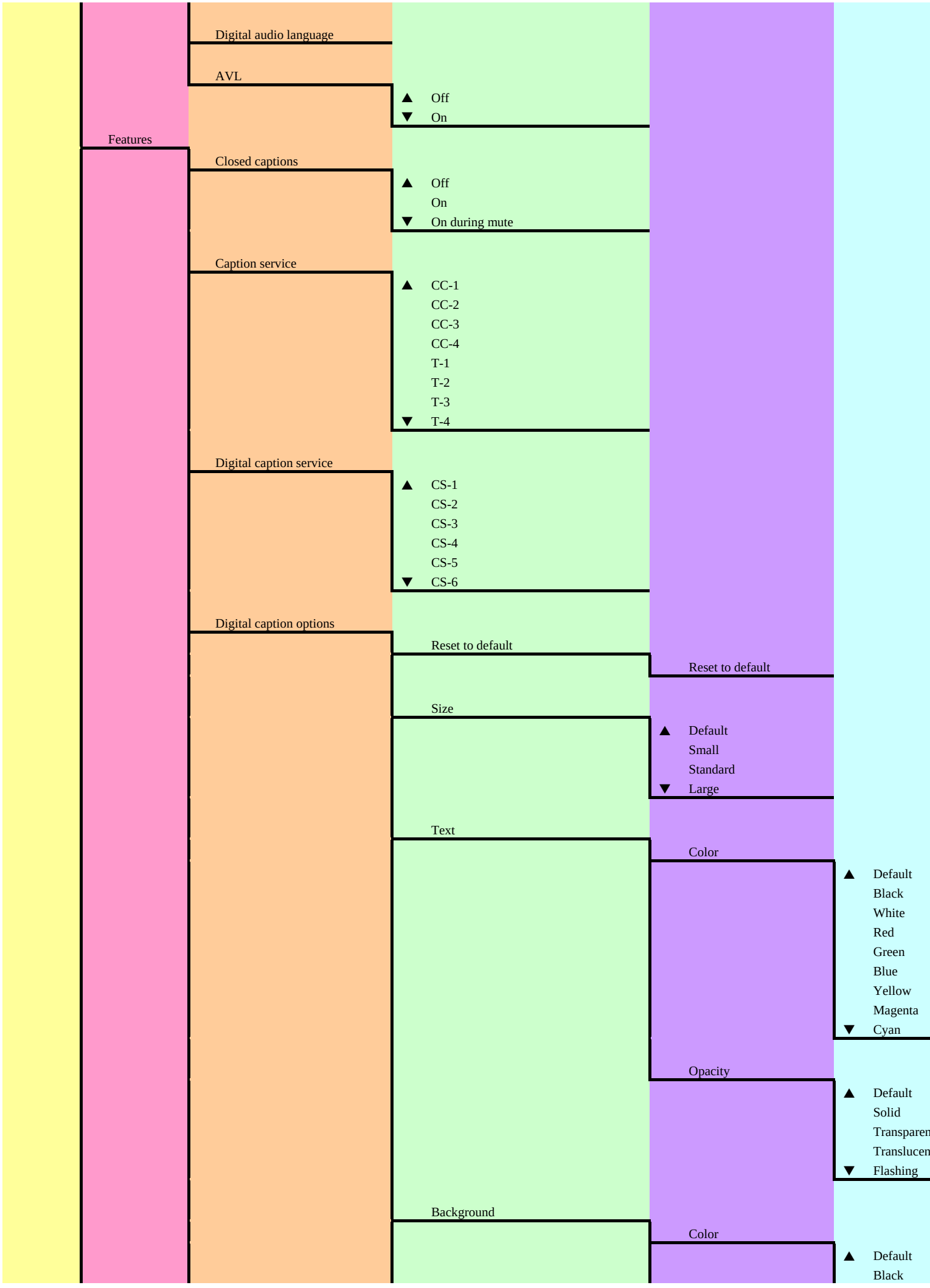
[1] ADJUSTMENT PROCEDURE

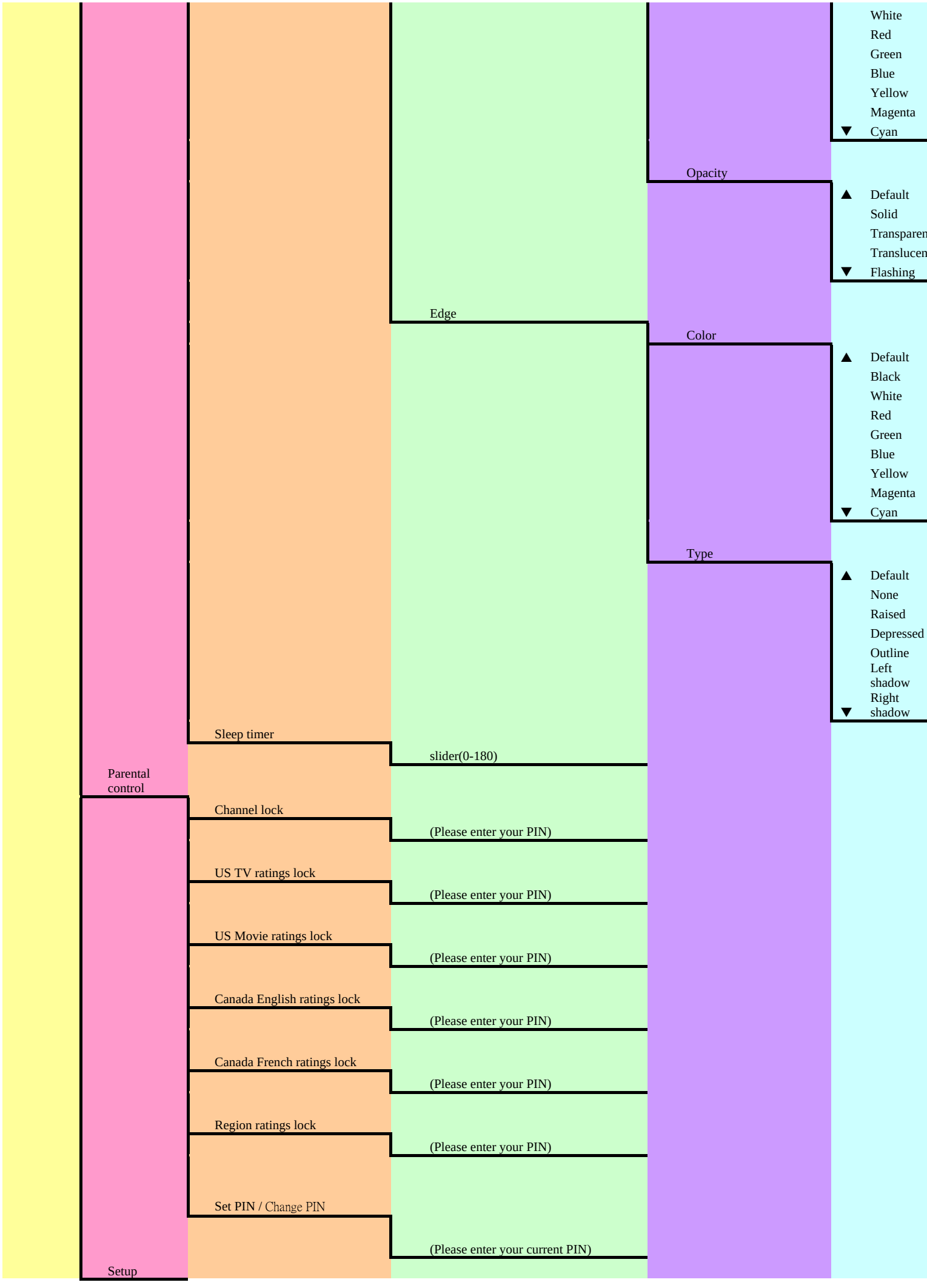
1 OSD MENU

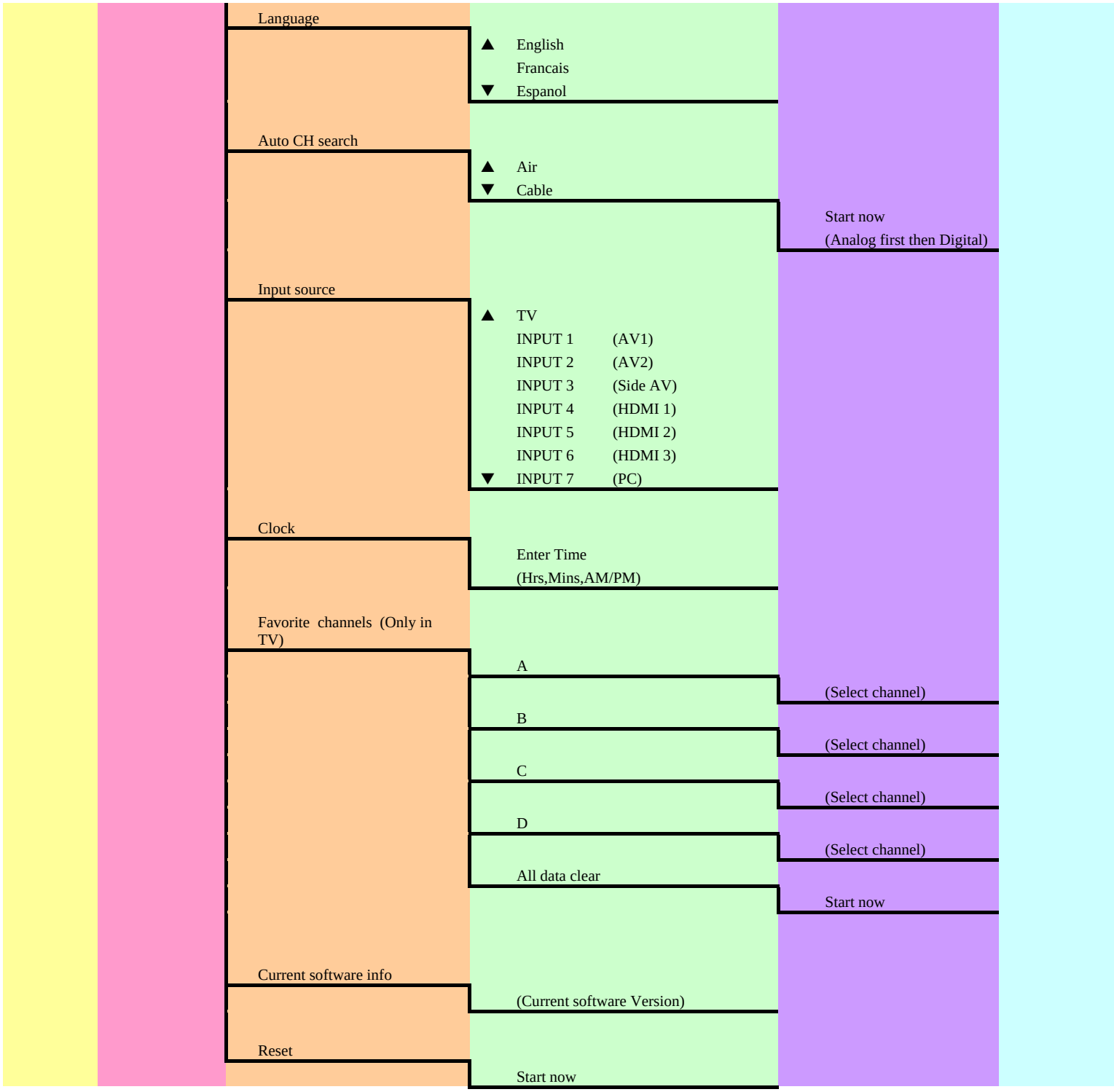
OSD tree - As following

● TV



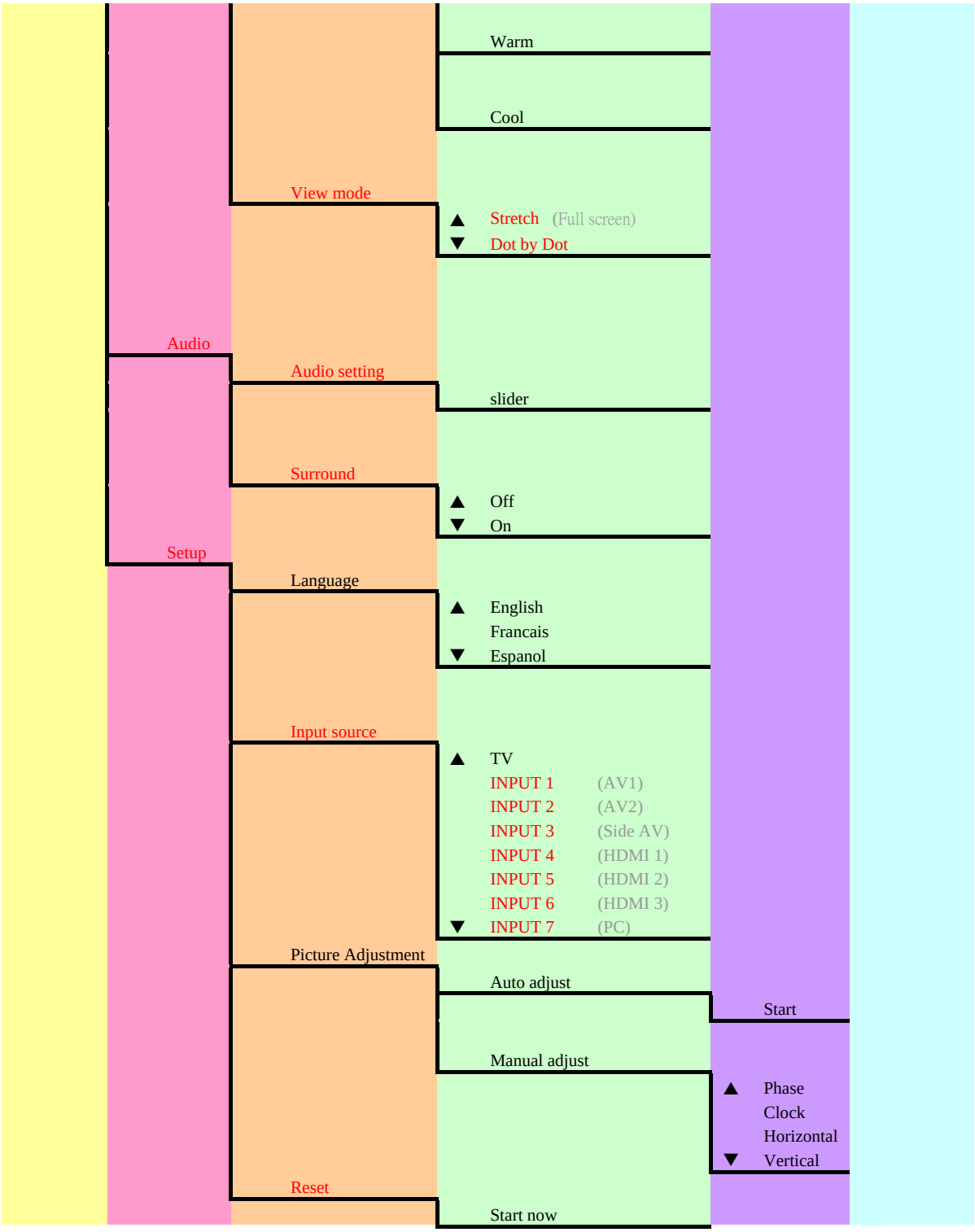

Features
Digital audio language
AVL
▲ Off
▼ On
Closed captions
▲ Off
On
▼ On during mute
Caption service
▲ CC-1
CC-2
CC-3
CC-4
T-1
T-2
T-3
▼ T-4
Digital caption service
▲ CS-1
CS-2
CS-3
CS-4
CS-5
▼ CS-6
Digital caption options
Reset to default
Reset to default
Size
▲ Default
Small
Standard
▼ Large
Text
Color
▲ Default
Black
White
Red
Green
Blue
Yellow
Magenta
▼ Cyan
Opacity
▲ Default
Solid
Transparen
Translucen
▼ Flashing
Background
Color
▲ Default
Black


White
Red
Green
Blue
Yellow
Magenta
▼ Cyan
Opacity
▲ Default
Solid
Transparen
Translucen
▼ Flashing
Edge
Color
▲ Default
Black
White
Red
Green
Blue
Yellow
Magenta
▼ Cyan
Type
▲ Default
None
Raised
Depressed
Outline
Left shadow
Right shadow
▼
Sleep timer
slider(0-180)
Parental control
Channel lock
(Please enter your PIN)
US TV ratings lock
(Please enter your PIN)
US Movie ratings lock
(Please enter your PIN)
Canada English ratings lock
(Please enter your PIN)
Canada French ratings lock
(Please enter your PIN)
Region ratings lock
(Please enter your PIN)
Set PIN / Change PIN
(Please enter your current PIN)
Setup



- PC

OSD Menu	Layer1	Layer2	Layer3	Layer4	Layer5
SETTINGS					
	Picture				
		Contrast	slider(0-100)		
		Brightness	slider(0-100)		
		Color temperature	Normal		


Warm
Cool
View mode
▲ Stretch (Full screen)
▼ Dot by Dot
Audio
Audio setting
slider
Surround
▲ Off
▼ On
Setup
Language
▲ English
Francais
▼ Espanol
Input source
▲ TV
INPUT 1 (AV1)
INPUT 2 (AV2)
INPUT 3 (Side AV)
INPUT 4 (HDMI 1)
INPUT 5 (HDMI 2)
INPUT 6 (HDMI 3)
▼ INPUT 7 (PC)
Picture Adjustment
Auto adjust
Start
Manual adjust
▲ Phase
Clock
Horizontal
▼ Vertical
Reset
Start now

2. Picture check

1) WHITE-D adjustment

General set-up :

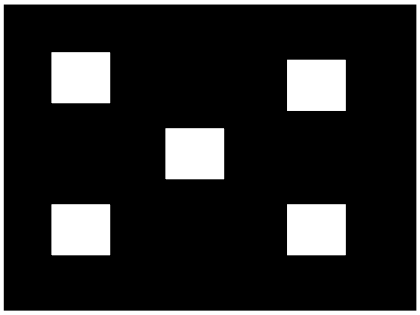
Equipment Requirements: Minolta CA-110 or Equivalent Color analyzer Chroma 2250 or equivalent PC signal generator input requirements:

Input Signal Type : PC VGA signal

1024X768/60Hz PC mode with **"5 white block"** pattern. (see pattern-1)

Input Signal Strength : 0.7 Vp-p linear voltage.

Input Injection Point : PC D-SUB input



Pattern-1

Alignment method:

Initial Set-up:

1. Select source as "PC".
2. Set Contrast = 50 (CMO) and Brightness=50 (CMO) , at normal menu mode.
3. Apply "5 white block"(pattern-1) pattern by VGA pattern generator.
4. Enter factory mode menu: Numeric keys "062596" + "Display" key (FAC mode menu). Then select "Factory" item.

Alignment:

1. At FAC mode menu, select AUTO_COLOR item. Then press "OK" key to adjust ADC_GAIN_R, ADC_GAIN_G, ADC_GAIN_B and ADC_OFFSET_R, ADC_OFFSET_G, ADC_OFFSET_B. Then store those values to NVM.
2. Apply Flat80 pattern (80% white pattern).
3. Set color temperature to "NORMAL".
4. At FAC mode menu, adjust the CLR TEMP R, CLR TEMP G, CLR TEMP B values to meet "NORMAL" color coordinates specification below. Then store those values to NVM
3. Set color temperature to "COOL".
4. At FAC mode menu, adjust the CLR TEMP R, CLR TEMP G, CLR TEMP B values to meet "COOL" color coordinates specification below. Then store those values to NVM
3. Set color temperature to "WARM".
4. At FAC mode menu, adjust the CLR TEMP R, CLR TEMP G, CLR TEMP B values to meet "WARM" color coordinates specification below. Then store those values to NVM

Color temperature Normal/Warm/Cool (x, y) co-ordinates specification:

Picture Mode	x	y
Normal (9000oK)	0.289±0.005	0.291±0.005
Cool (11500oK)	0.278±0.005	0.278±0.005
Normal (6500oK)	0.314±0.005	0.319±0.005

Table 5: Reading with Minolta CA-110.

Note:

1>. Use Minolta CA-110 for color coordinates and luminance check.

2>. **Luminance >** 400 **cd/m^2** in the center of the screen when Brightness control at 100; Contrast control at 100 for CMO 26", 32", 42" panels.

2) YPbPr Mode display adjustment

White balance adjustment

General set-up :

Equipment Requirement: Minolta CA-110 or Equivalent Color analyzer

Quantum Data Pattern Generator 802G , 802BT or equivalent instrument

Input requirements:

Input Signal Type : YPbPr signal

1. 720P mode, TVBar100 pattern by 802G or 802BT.
2. Select Smart picture to Personal mode and check the x, y data.

Input Signal Strength : 1 Vpp for Y signal ; 700 mVpp for Pb & Pr signal

Input Injection Point : AV1 YPbPr (RAC jack)

720P, TVBar100 pattern

Alignment method:

Initial Set-up:

1. Select source as "AV1".
2. Set Smart picture as "Personal" and to be Contrast =50, Brightness=50 , at normal menu mode.
3. Apply "TVBar100" pattern (with black & white bar)by signal generator.
4. Enter factory mode menu: press Numeric keys "062596" then perss Display key (FAC mode menu). Then select "Factory" item.

Alignment:

1. At FAC mode menu, select AUTO_COLOR item. Then press "OK" key to adjust ADC_GAIN_R, ADC_GAIN_G, ADC_GAIN_B and ADC_OFFSET_R, ADC_OFFSET_G, ADC_OFFSET_B. Then store those values to NVM.
2. Apply Flat_73 pattern or 75IRE pattern.
3. Set color temperature to "NORMAL".
3. Copy CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values from "NORMAL" color temperature in Analog TV mode. Check whether (x,y) color coordinates meet "NORMAL" color specification below. If color coordinates are out of specification, fine-tune CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values. Then store those values to NVM. (R/G/B gain value <= 130)
4. Set color temperature to "WARM".
5. Copy CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values from "WARM" color temperature in Analog TV mode. Check whether (x,y) color coordinates meet "WARM" color specification below. If color coordinates are out of specification, fine-tune CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values. Then store those values to NVM. (R/G/B gain value <= 130)
6. Set color temperature to "COOL".
7. Copy CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values from "COOL" color temperature in Analog TV mode. Check whether (x,y) color coordinates meet "COOL" color specification below. If color coordinates are out of specification, fine-tune CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values. Then store those values to NVM. (R/G/B gain value <= 130)

Color temperature Normal/Warm/Cool (x, y) co-ordinates specification:

Picture Mode	x	y
Normal (9000oK)	0.289±0.010	0.291±0.010

WARM (6500oK)	0.314±0.010	0.319±0.010
COOL(11000oK)	0.278±0.010	0.278±0.010

3) HDMI HDCP Key Download

1 HDCP Key Encryption

The handling of HDCP keys must be done in the most secure way.

The HDCP keys purchased / delivered from Digital Content Protection, LLC are first encrypted by MTK encryption software. Then the encrypted keys are stored in secure room or secure PC in production line.

2 HDCP Key Downloading to Set

In production line PC, execute HDCP key programming software to load encrypted key data from secure room or secure PC to specific positions of set's NVM via UART interface of MT538x chip.

3 Test HDCP Key

3.1. Use QuantumData 802BT or equivalent instrument with HDCP test pattern to verify HDCP key loaded in the set. The "PASS" information will be shown in the lower center block of the screen when HDCP key is correctly loaded.

3.2 Use DVD player Pioneer DVD player xxx or equivalent DVD player with HDMI output to verify HDCP key loaded in the set. The video should be smoothly displayed when HDCP key is correctly loaded.

4) Preset NVM data

NVM (U301) data has to be preset data according following table.

• NVM file name description:

1. FL4 (project name)
2. CMO 42" (Panel type and size)
3. NVM_xxxx (finalize testing Date)
4. xxxx(checksum / 2bytes) for CMO 42" panel

1>. Factory mode preset.

· Default Values

VIRGIN_MODE	Off
AGING_MODE	On
GAMMA_TABLE	Off
COLOR_ENHANCE	On
SET_PIN	Off
FINETUNE_EQ	Off
ORT_MODE	On

Note:ORT_MODE is Off for outgoing and is On at production line.

VIRGIN_MODE is ON for outging and is Off at production line.

	YPbPr
ADC_GAIN_R	48
ADC_GAIN_G	48
ADC_GAIN_B	48
ADC_OFFSET_R	64
ADC_OFFSET_G	64
ADC_OFFSET_B	64

Note: These above values will be changed after doing "AUTO_COLOR" at FAC mode menu.

	YPbPr		
	NORMAL	WARM	COOL
CLR_TEMP_R	128	135	128
CLR_TEMP_G	117	110	121
CLR_TEMP_B	99	71	115

Note: These above values will be changed after doing W/D alignment at FAC mode menu

	Personal	Sports	Standard	Movie	Power Saver
SP_MODE_3DNR	3	3	3	4	4
SP_MODE_PWM	15	15	15	15	120

These above values are defined by Development Division and written in SW code

	YPbPr	
SP_GAIN_BRI	123	
SP_GAIN_CNT	128	
SP_GAIN_TINT	32	
SP_GAIN_CLR	142	

These above values are defined by Development Division and written in SW code.

VIDEO_PWM_NORMAL	15
VIDEO_PWM_MEDIUM	120
VGA_PWM_MIN	200
VGA_PWM_MAX	15

These above values are defined by Development Division and written in release NVM.

2>. Smart picture & Smart sound & Feature

Final TV mode out of box setting.

a). Picture part :

Picture Format : Widescreen

Color Temp in Factory mode : Cool

b) Sound part : (default)

SOUND VOLUME : 20

Sound mode :Stereo

Alternative audio : Main

AVL : off

Smart Picture

Standard/ Personal Stereo AVL : off	EQ BAND1 120Hz	0
	EQ BAND2 500Hz	0
	EQ BAND3 1.5KHz	0
	EQ BAND4 5KHz	2
	EQ BAND5 10KHz	2
Sports Stereo AVL : off	EQ BAND1 120Hz	2
	EQ BAND2 500Hz	2
	EQ BAND3 1.5KHz	0
	EQ BAND4 5KHz	-2
	EQ BAND5 10KHz	-2
Movies Stereo AVL : off	EQ BAND1 120Hz	8
	EQ BAND2 500Hz	4
	EQ BAND3 1.5KHz	0
	EQ BAND4 5KHz	4
	EQ BAND5 10KHz	8
Power saver Stereo AVL : off	EQ BAND1 120Hz	6
	EQ BAND2 500Hz	4
	EQ BAND3 1.5KHz	0
	EQ BAND4 5KHz	4
	EQ BAND5 10KHz	6

Personal	Contrast	50
	Brightness	50
	Color	50
	Sharpness	4
	Color temperature	normal
	Tint	0
	Dynamic contrast	--
	Picture format	wide
Sports	Contrast	70
	Brightness	45
	Color	65
	Sharpness	5
	Color temperature	normal
	Tint	0
	Dynamic contrast	--
	Picture format	wide
Standard	Contrast	50
	Brightness	50
	Color	50
	Sharpness	4
	Color temperature	normal
	Tint	0
	Dynamic contrast	--
	Picture format	wide
Movie	Contrast	58
	Brightness	50
	Color	50
	Sharpness	5
	Color temperature	normal
	Tint	0
	Dynamic contrast	on
	Picture format	wide
Power saver	Contrast	55
	Brightness	50
	Color	50
	Sharpness	2
	Color temperature	normal
	Tint	0
	Dynamic contrast	--
	Picture format	wide

c)Features:

Closed captions: Off

Caption service: CC-1

Digital caption service: CS1

Digital caption options: • Size :Large

• Style : Sans Serif

• Text : Color : Default

Opacity : Default

• Background : Color : Default

Opacity : Default

Sleeptimer: 0

D) Installation:

Language: English

Clock: -- : -- AM

Current software info: TPV Version: FL4 ATSC Vx.xx.x yymmdd

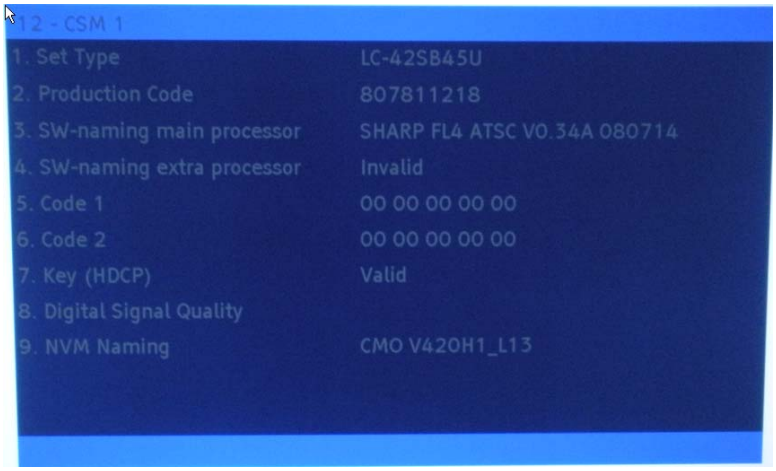
[2] CSM MODE

How to Enter CSM mode method :

Step1: Press number key “123654” on remote control.

Step2: It will show CSM mode picture as below.

Step3: Press menu or volume up down key to exit CSM mode.



every item’s meaning as below :

Customer Service Menu 1
1:Set Type to be retrieved out of production -data
2: Production code 14 digit production -cde to be retrieced per set to be written in NVM/EEPROm
3:SW-naming main-processor SW-naming of MSTAR /Trident.see format in generic service document
4:SW-naming extra processor if valid
5:Code 1″Logging I2C errcodes in NVM/EEPROM (5 last logged errors)
6:Code 2″Logging I2C errcodes in NVM/EEPROM (5 last logged errors)
7:Key(HDCP)-HDMI information whehther HDCP-Key is valid
8:Digital signal quality:(for Digital TV only)
9:NVM-naming :panel information

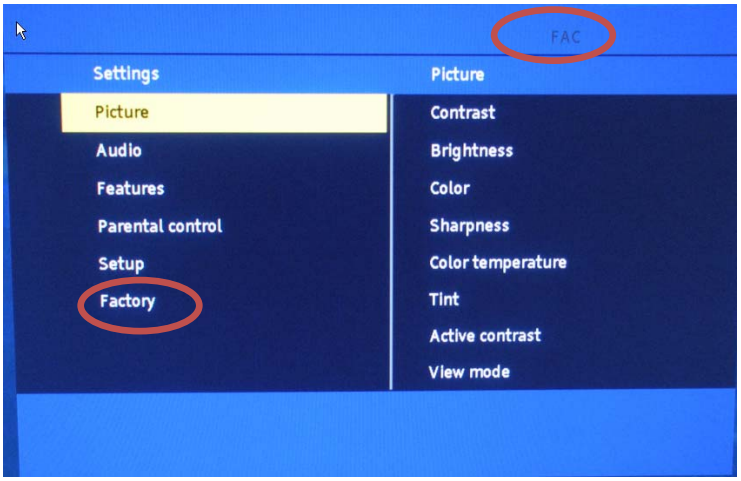
Error Code :

Error Code Type	Error Code	Store to EEPROM
TUNER	3	Yes

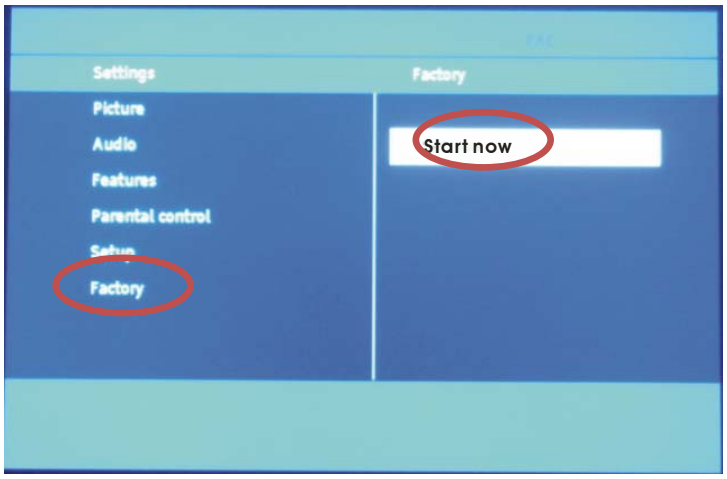
[3] FACTORY MODE

How to Enter factory mode menu:

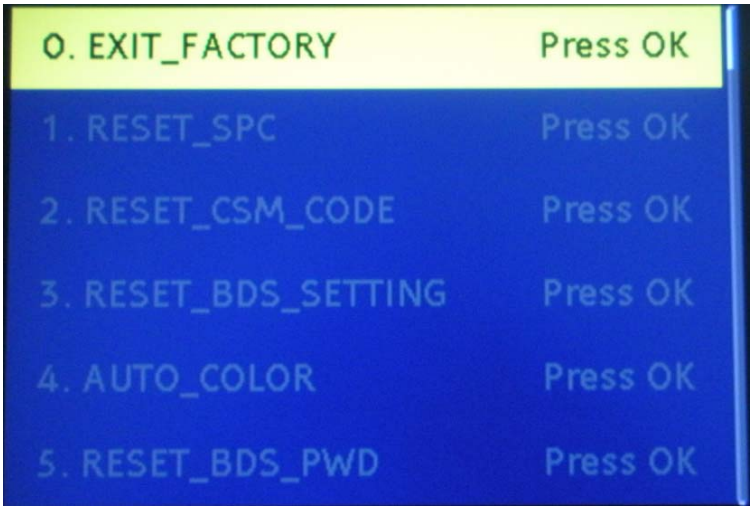
1. Press Numeric keys “062596” + “Display” key (you should keep “Display” key until display below picture)(FAC mode menu).



2. Scroll to the “Factory” selection and press “▶ ”, then choose”start now” and press”ENTER”key to enter the factory model



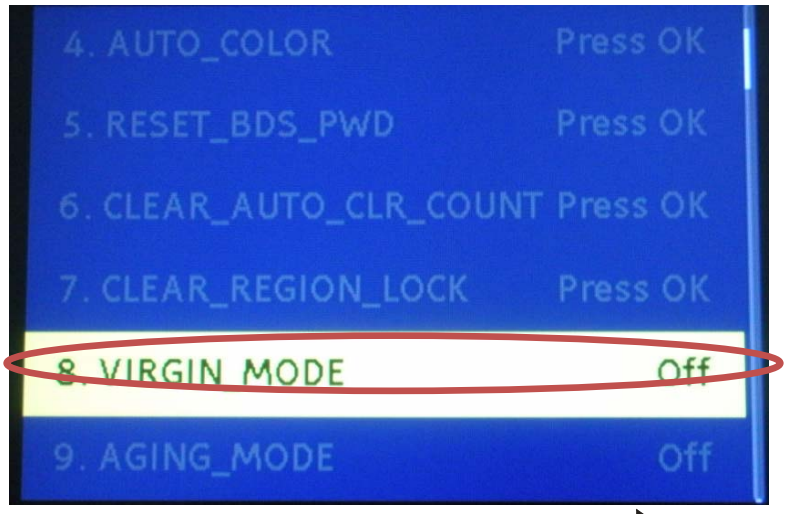
3.In the factory setting,press” ▼ “and “▲ “ key to set the state that you want.



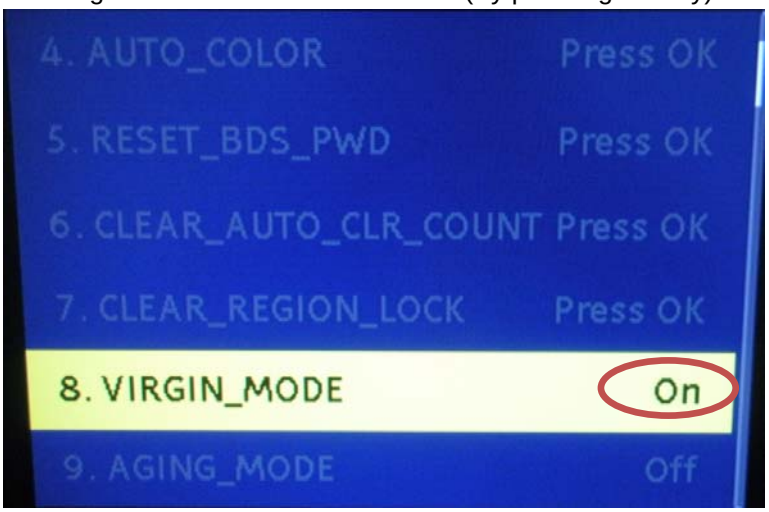
4.Press “Menu” to exit. or select “0” in the menu selection by up/down key then press enter.

Note: How to reset the factory setting?

1.Enter the facotry model(see page 28),then choose item 8 “VIRGIN_MODE” .

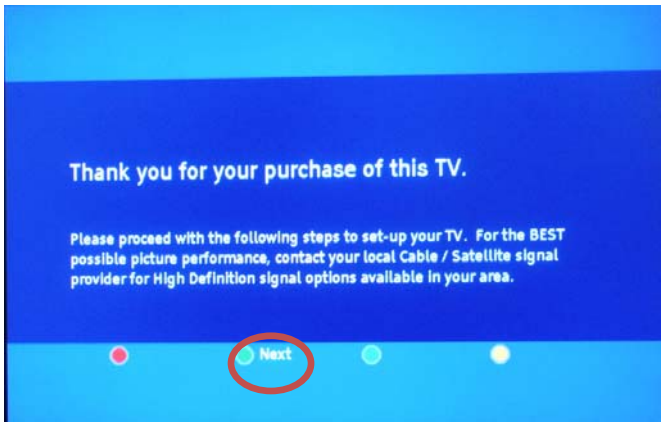


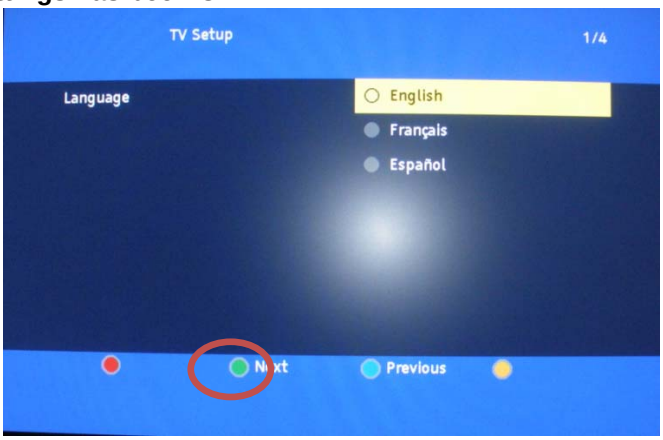
2.Change the state from ”Off”” to “On” (By pressing “▶”key).

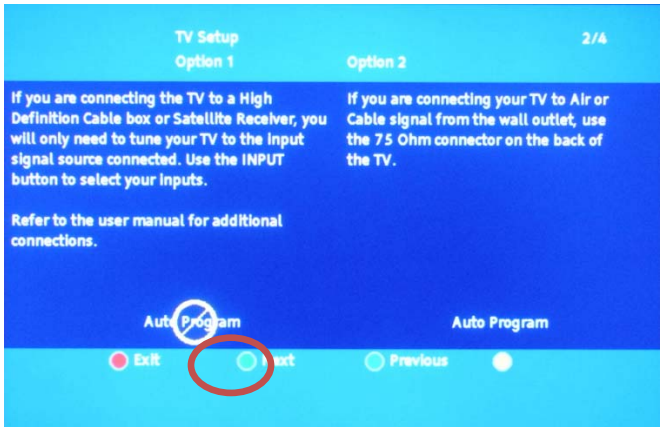


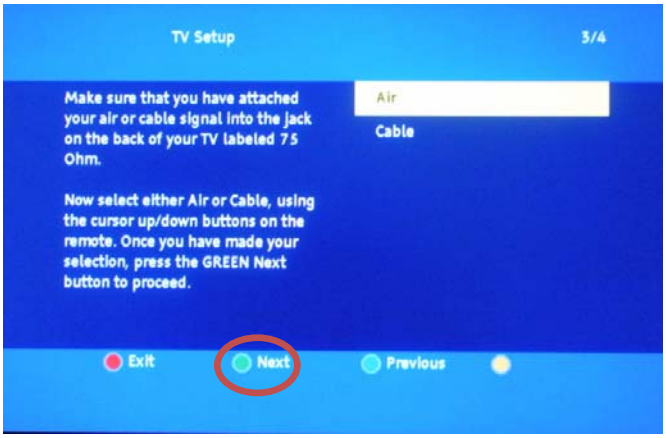
3. Press “Menu” to exit. or select “0” in the menu selection by up/down key then press “enter” .
4. Turn Power Off.

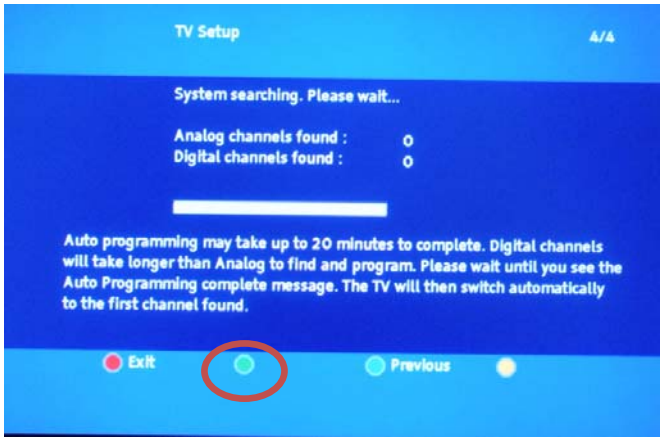
Then power on the set,you can find the factory settings has been OK.

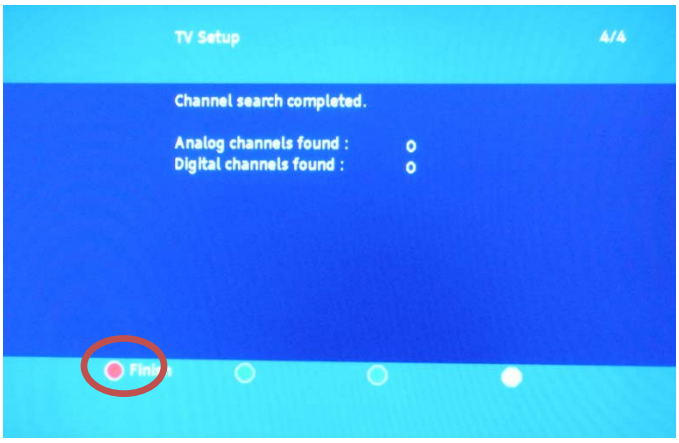












[4] SOFTWARE UPGRADE PROCEDURE

Environment Setup

Before you start to write the code, we suggest you setup the environment first. This chapter lists the setup requirements and guides you to setup and test your development environment.

Connect to ISP Board.

Use USB port connecting PC & MT537x Board via ISP board(Code number: 715G537XL2).

ISP tool

ISP tool

1. Unzip USB2COM Driver.zip to C:\


PL-2303 Driver Installer.zip


PL-2303 Driver Installer.zip

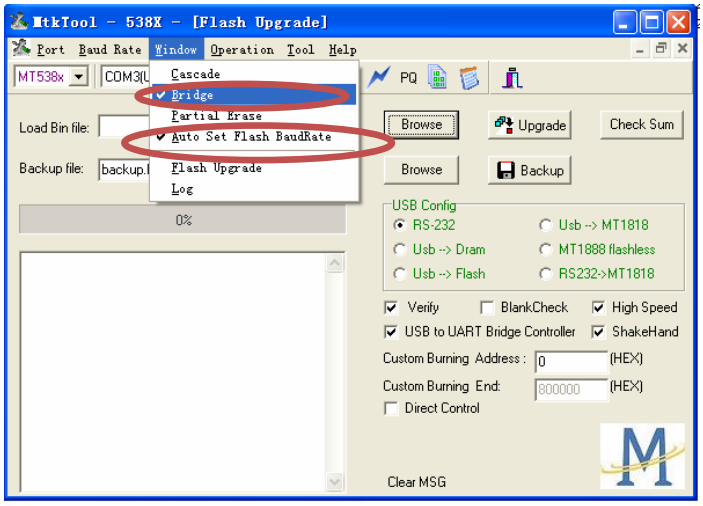
PL-2303 Driver Installer.exe

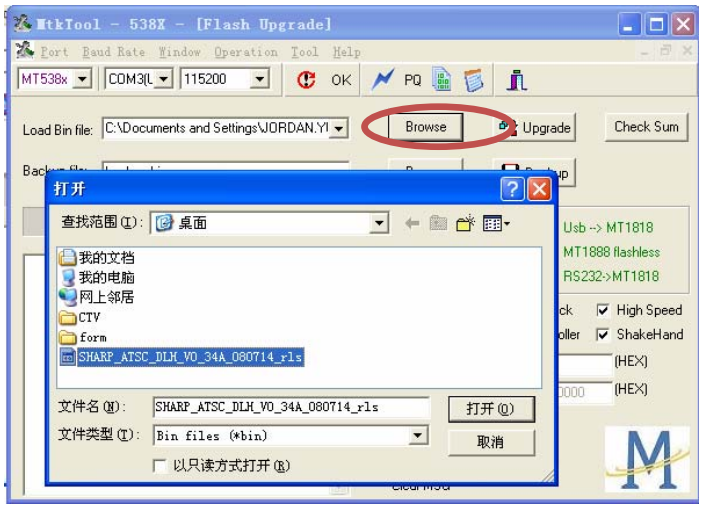
2. Unzip USB2COM Driver.zip to C:\

Use MTK_Tools to download .bin file. (Ex: F4_dbg_image.bin or F4_image.bin)

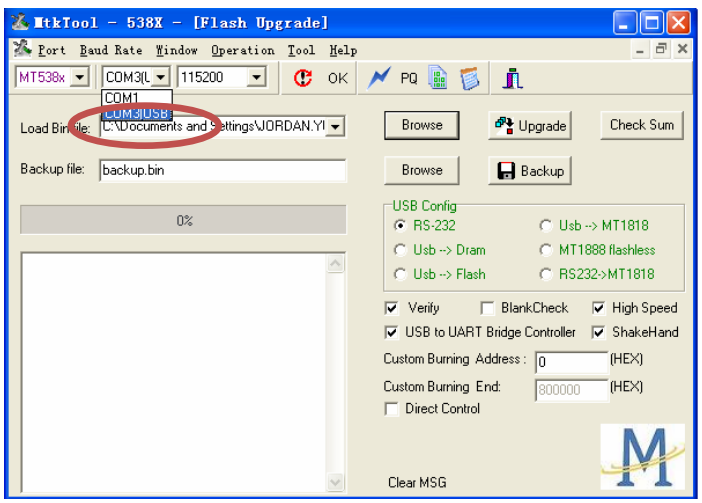
3. Make sure the Type “MTK538X” && “USB Baud Rate 115200” && Load the correct “bin” file.

Load .bin file on the Linux system or on the local Windows file system(Ex: SHARP_ATSC_DLH_V0_34A_080714.bin) & Set Bridge & Auto Set Flash BaudRate

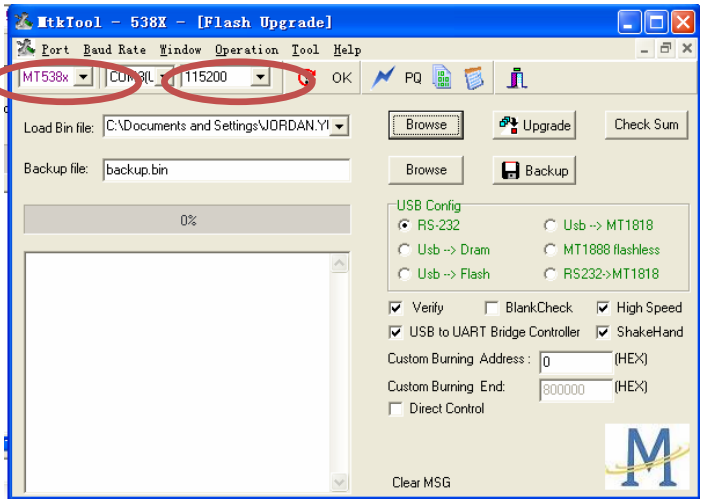




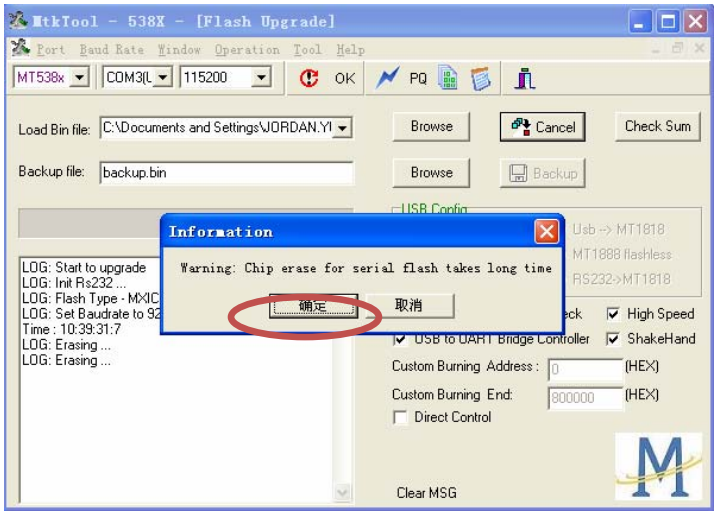
4. Set COM port resource that used by USB Port.

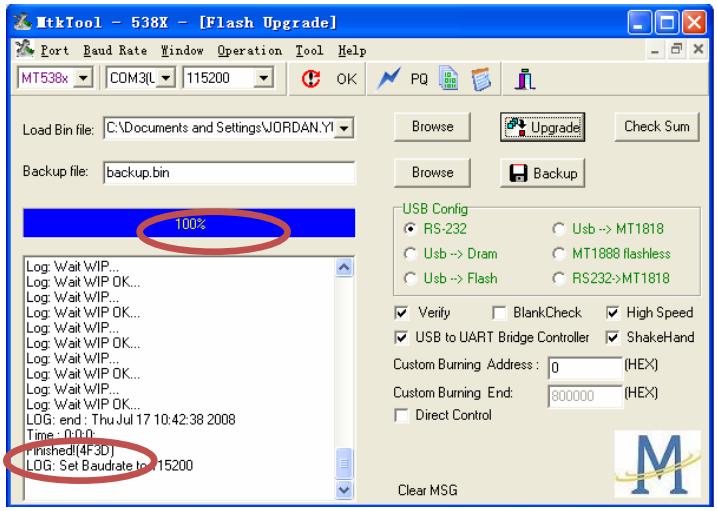


5. Set Baud rate 115200 & High speed item Enable. & MT538x.



6. Push “Upgrade” button. (Waiting for “Finished!” message.)
   Press “確定” button





7. Mainboard Power Off - On.

CHAPTER 4. TROUBLESHOOTING TABLE

[1] TROUBLESHOOTING TABLE

Power unit operation check.

↓

Are the power cord and harness in the unit properly connected?

NO → Connect the power cord and harness properly, and turn on the power.

LINE_FILTER_UNIT: ↓ YES

Is F901 normal?

NO → LINE_FILTER_UNIT:
Isn't L901,L902,RV902,C908,C909,C901,C902, etc. out of order? Moreover, whether the short-circuit with the circumference circuit is checked.

NO → POWER_UNIT:
BD901, RV904, IC902, TH901, etc. out of order?
Moreover, whether the short-circuit with the circumference circuit is checked.

POWER_UNIT ↓YES

Is BD901 (+320V) output? (Set the main power SW to OFF.)

* When power on/off switch is on ・・・ About +400V

NO → Does the PFC circuit operate normally?
(L903, L964, Q925, ZD914, D930, Q902, IC902 and etc. And, the circuit around the protection circuit etc. is checked.)

↓YES

Is a voltage of +5V applied to pin (11,12) of connector (CN902)? (Set the main power SW to OFF.)

NO → Does the switching circuit operate normally?
Check circuit around the primary side (T904, IC903, Q922, Q924, ZD911, D924, D908, ZD910, etc.), the secondary side (D927, L907, etc.), the AC_DET circuit (ZD912, ZD913, IC911, IC913, Q918, IC909, Q915, etc.), and the protection circuit.

↓YES

Are +24V output as for the power on/off switch when it is on?

NO → Does the inverter circuit operate normally?
Check circuit around the primary side (T905,Q920,Q919,IC901, Q917,Q923,D936,D937,D932,ZD915,ZD916, etc.), the secondary side (D901, D902, L906, L908, IC910, IC914, etc.), the STANDBY circuit (Q915, etc.), and the protection circuit.

↓YES

Similarly, is +12V output as for the power on/off switch when it is on?

NO → Check +12V circuit of D928, L909, etc.

The sound is not emitted from the speaker though the picture has come out.

↓

No sound output in all modes?

TEREMINAL UNIT: ↓

Is the audio signal output of pin (E26) (AL2) and pin (F25) (AR2) of IC U400 normal?

NO → Check IC U400 and its peripheral circuits.

↓YES

Is audio signal input to pin (2)(L), pin (14)(R) of IC U600 (AMP)?

NO → Check the line between IC U400 and IC U600.

↓YES

Is MUTE circuit [AMP_MUTE_LINE, POWERUP_LINE] normal?

NO → Check the AMP_MUTE_LINE and POWERUP_LINE. (Q600, etc.)

↓YES

Is the audio signal output of pin (2, 1) (L-ch) and pin (1, 2) (R-ch) of CN604 & CN605(AOUDIO-CONNECTOR) normal?

NO → Check IC U600 and its peripheral circuits.

↓YES

Check Speaker (right and left) and wire harness.

No sound (during the reception of TV(ANALOG) broadcasting)

↓

Does not the sound go out though the picture has come out when UHF/VHF is received?

TEREMINAL UNIT: ↓

Is the SIF signal output from pin (3) of TUNER (TU201)?

NO → Check the tuner and its peripheral circuits. Replace as required.

↓YES

Is the SIF signal sent to pin (P25) and pin (P26) of IC U400?

NO → Check IC U400 its peripheral circuits.

↓YES

Refer to “No sound output in all modes”.

No sound (during the reception of TV (DIGITAL) broadcasting)

↓

Does not the sound go out though the picture has come out when DTV is received?

MAIN UNIT: ↓

Is the DIF signal output from pin (18) and pin (19) of TUNER (TU201)?

NO → Check the tuner and its peripheral circuits. Replace as required.

↓YES

Is the DIF signal sent to pin (AB24) and pin (AC24) of IC U400?

NO → Check IC U400 its peripheral circuits.

↓YES

Refer to “No sound output in all modes”.

No sound from external input devices (1)

↓

Does not the sound of the audio signal input to INPUT 1(Component) go out?

Does not the sound of the audio signal input to INPUT 2(Component) go out?

MAIN UNIT: ↓

Is the audio signal properly sent to pin (2) (AV1_AudioLIN) and pin (4)(AV1_AudioRIN) of CN552?

NO → Check the connection to CN552 and the external input device.

Is the audio signal properly sent to pin (2) (AV2_AudioLIN) and pin (4)(AV2_AudioRIN) of CN551?

NO → Check the connection to CN551 and the external input device.

↓YES

Is the audio signal properly sent to pin (J23) (AV1_LIN) and pin (J24) (AV1_RIN) of IC U400?

NO → Check the line between CN552 and IC U400.

Is the audio signal properly sent to pin (J25) (AV2_LIN) and pin (J26) (AV2_RIN) of IC U400?

NO → Check the line between CN551 and IC U400.

↓YES

Refer to “No sound output in all modes”.

No sound from external input devices (2)

↓

Does not the sound of the audio signal input to INPUT 3(Composite, Y/C) go out?

MAIN UNIT: ↓

Is the audio signal properly sent to pin (4) (AV3_AudioLIN) and pin (6) (AV3_AudioRIN) of CN650?

NO → Check the connection to CN650 and the external input device.

↓YES

Is the audio signal properly sent to pin (K23) (AV3_LIN) and pin (K24) (AV3_RIN) of IC U400?

NO → Check the line between CN650 and IC U400.

↓YES

Refer to “No sound output in all modes”.

No sound from external input devices (3)

↓

Does not the sound of the audio signal input to INPUT 7 (VGA) go out?

MAIN UNIT: ↓

Is the audio signal properly sent to pin (2) (VGA_AudioLIN) and pin (3) (VGA_AudioRIN) of CN555?

NO → Check the connection to CN555 and the external input device.

↓YES

Is the audio signal properly sent to pin (K25) (VGA_LIN) and pin (K26) (VGA_RIN) of IC U400?

NO → Check the line between CN555 and IC U400.

↓YES

Refer to “No sound output in all modes”.

No sound from external input devices (4)

↓

Does not the sound of the audio signal input to INPUT 4/5/6 (HDMI1/2/3) go out?

↓

Is picture of the signal input from INPUT 4/5/6 displayed?

NO → Refer to “Does not the picture of the HDMI signal input to HDMI1/2/3 go out?”.

↓YES

Refer to “No sound output in all modes”.

The digital audio signal is not output (1)

↓

No digital audio signal output from SPDIF_OUTPUT terminal.

TEREMINAL UNIT: ↓

Is ASPDIF audio signal output from pin (B22) of IC U400 to pin (6) of connector CN553?

YES → Check the connection to SPDIF_OUT and external devices.

↓NO

Check IC U400 and its peripheral circuits.

No picture on the display (1)

↓

The picture doesn't appear in all modes.

MAIN UNIT: ↓

Is LVDS signal output from 1st_channel and 2nd_channel of IC U400 in each mode?
(A0N/A0P),(A1N/A1P),(A2N/A2P),(A3N/A3P),(CLK1N/CLK1P),(A4N/A4P),(A5N/A5P),(A6N/A6P),(A7N/A7P),(CLK2N/CLK2P)

↓NO

Check IC U400 and its peripheral control circuits.

YES

Is the above-mentioned LVDS signals output to connector CN750? — NO → Check the line between IC U400 and CN750.

↓YES

Is LCD controller's control signal normal? — NO → Control signals BRIGHT_ADJ, INVERTER_ON_OFF, PANEL_VCC_ON/OFF, and it peels off and whether normality is checked.

PANEL_UNIT: ↓YES

Similarly, is the LVDS signal input to connector of the panel module? — NO → Wire harness is checked.

↓YES

Check the panel module.

No picture on the display (2)

↓

Does not the picture come out when VHF/UHF is received?

TERMINAL UNIT: ↓

Is TUNER_CVBS signal output from pin (4) of TUNER (TU201)? — NO → Check whether I2C is normally accessed between TU201 and IC U400.

MAIN_UNIT: ↓YES

Is picture signal input from pin (4) of TUNER (TU201) to pin (AC26) of IC U400? — NO → Check the line between IC U400 and TU201.

↓YES

Refer to “The picture doesn't appear in all modes.”

No picture on the display (3)

↓

Does not the picture come out when DTV is received?

TERMINAL UNIT: ↓

Is the voltage of regulation for a TUNER circuit and the power supply terminal of Q103 supplied? — NO → Each power supply circuit is checked.

↓YES

Is IF signal output from pin (18), (19) of TUNER (TU201) to pin (AB24), pin (AC24) of IC U400? — NO → Check the tuner, IC U400 and their peripheral circuits. Replace as required.

TERMINAL UNIT: ↓YES

Similarly, is communication control carried out between pin (12)(SCL), pin(13)(SDA), pin(16)(AGC) of TU201? — NO →

MAIN_UNIT: ↓YES

Do X300 (60.00MHz) oscillate? — NO → Check X300 and its peripheral circuits.

↓YES

Refer to “The picture doesn't appear in all modes.”

<External input 1 / input 2 (Component)>No picture on the display (4)

↓

Does not the picture of the component video signal input (INPUT 1) to Component go out?

Does not the picture of the component video signal input (INPUT 2) to Component go out?

TERMINAL_UNIT: ↓

Is Component Y/Pb/Pr signal sent to pin (2)/Y, (4)/Pb, (6)/Pr of AV1(CN552) ? NO → Check the setting of an external input device that connects of CN552.

Is Component Y/Pb/Pr signal sent to pin (2)/Y, (4)/Pb, (6)/Pr of AV1(CN551) ? NO → Check the setting of an external input device that connects of CN551.

MAIN_UNIT: ↓YES

Is Component Y/Pb/Pr signal sent to pin (AD19)/Y, (AF20)/Pb, (AD20)/Pr of IC U400? NO → Check the line between IC U400 and CN552

Is Component Y/Pb/Pr signal sent to pin (AE21)/Y, (AE22)/Pb, (AE23)/Pr of IC U400? NO → Check the line between IC U400 and CN551.

↓YES

Refer to “The picture doesn't appear in all modes.”

<External input AV3 input 3 (Composite)>No picture on the display (5)

↓

Does not the picture of the composite video signal input to AV3(Composite) go out?

TERMINAL UNIT: ↓

Is CVBS signal sent to pin (2) of AV3 (CN650) ? NO → Check the setting of an external input device that connects of CN650.

MAIN_UNIT: ↓YES

Is CVBS signal sent to pin (AD26) of IC U400? NO → Check the line between IC U400 and CN650.

↓YES

Refer to “The picture doesn't appear in all modes.”

<External input AV3 input 3 (Y/C)>No picture on the display (6)

↓

Does not the picture of the Y/C video signal input to AV3(Y/C) go out?

TERMINAL UNIT: ↓

Is Y/C signal sent to pin (8)/Y, (7)/C of AV3 (CN650) ? NO → Check the setting of an external input device that connects of CN650.

MAIN_UNIT: ↓YES

Is Y/C signal sent to pin (AD25)/Y, (AE26)/C of IC U400? NO → Check the line between IC U400 and CN650.

↓YES

Refer to “The picture doesn't appear in all modes.”

<External input HDMI1 input 4 >No picture on the display (7)

↓

Does not the picture of the HDMI signal input to HDMI1 go out?

MINI AV_UNIT: ↓

Is the HOT_PLUG detection function of pin (19) of a HDMI terminal (CN702) normal?

NO → Check the line between pin (AE1) of IC U400 and CN702.

↓

Check the connection and setup with the external HDMI devices.

YES ↓

Are EDID data pin (6)(SCL) of IC U708 (EEPROM), pin (5)(SDA) accessed, and is it read from pin (15), pin (16) of a HDMI terminal(CN702)?

NO → Is access possible in the re-writing or exchange of EDID data of IC U708?

↓NO

YES ↓

Check CN702, IC U708 and peripheral circuits.

Is TMDS signal input into pin (AF7, AE7)/RX2±, (AF6, AE6)/RX1±, (AF5, AE5)/RX0±, (AF4, AE4)/RXC± of IC U400?

NO → Check the line between IC U400 and CN702.

↓YES

Refer to “The picture doesn't appear in all modes.”

<External input HDMI2 input 5 >No picture on the display (8)

↓

Does not the picture of the HDMI signal input to HDMI2 go out?

MINI AV_UNIT: ↓

Is the HOT_PLUG detection function of pin (19) of a HDMI terminal (CN700) normal?

NO → Check the line between pin (B20) of IC U400 and CN700.

↓

Check the connection and setup with the external HDMI devices.

YES ↓

Are EDID data pin (6)(SCL) of IC U701 (EEPROM), pin (5)(SDA) accessed, and is it read from pin (15), (16) of a HDMI terminal(CN700)?

NO → Is access possible in the re-writing or exchange of EDID data of IC U701?

↓NO

YES ↓

Check CN700, IC U701 and peripheral circuits.

Is TMDS signal input into pin (AF11, AE11)/RX2±, (AF10, AE10)/RX1±, (AF9, AE9)/RX0±, (AF8, AE8)/RXC± of IC U400?

NO → Check the line between IC U400 and CN700.

↓YES

Refer to “The picture doesn't appear in all modes.”

<External input HDMI3 input 6 >No picture on the display (9)

↓

Does not the picture of the HDMI signal input to HDMI3 go out?

MINI AV_UNIT: ↓

Is the HOT_PLUG detection function of pin (19) of a HDMI terminal (CN701) normal?

NO → Check the line between pin (AA4) of IC U400 and CN701.

↓

Check the connection and setup with the external HDMI devices.

YES ↓

Are EDID data pin (6)(SCL) of IC U700 (EEPROM), pin (5)(SDA) accessed, and is it read from pin (15), (16) of a HDMI terminal(CN701)?

NO → Is access possible in the re-writing or exchange of EDID data of IC U700?

↓NO

Check CN701, IC U700 and peripheral circuits.

YES ↓

Is TMDS signal input into pin (AF15, AE15)/RX2±, (AF14, AE14)/RX1±, (AF13, AE13)/RX0±, (AF12, AE12)/RXC± of IC U400?

NO → Check the line between IC U400 and CN701.

↓YES

Refer to “The picture doesn't appear in all modes.”

<External input VGA>No picture on the display (10)

↓

Does not the picture of the PC IN(ANALOG) video signal input to VGA **input 7** (15pin-D-SUB terminal) go out?

TERMINAL_UNIT: ↓

Is R/G/B/H/V signal sent to pin (1)/R, (2)/G, (3)/B, (14)/H, (13)/V of VGA (CN554)?

NO → Check the setting of an external input device that connects of CN554.

MAIN_UNIT: ↓YES

Is R/G/B/H/V signal sent to pin (AE18)/R, (AE17)/G, (AF16)/B, (AC16)/H, (AB17)/V of IC U400?

NO → Check the line between IC U400 and CN554.

↓YES

Refer to “The picture doesn't appear in all modes.”

CHAPTER 5. MAJOR IC INFORMATIONS

[1] Circuitry Description

1. General Description

This LCD-TV , FL4 support ATV NTSC / DTV ATSC (RF), YC, CVBS. Also for Y Pb Pr signal input from SDTV to HDTV (480i, 480p, 720p, 1080i/1080p 60Hz).

This FL4 platform LCD - TV use Media Tech MT5382 IC , which has embedded ADC for HD/Analog D-sub input (no use) , 3 digital port for HDMI 1.3 decoder digital data input , SD ADC for CVBS/YC input , video decoder , audio demodulator , audio decoder , audio DSP processing , USB 2.0 receiver , CC decoder , Microcontroller , OSD engine and up / down scaler .

MediaTek MT5382 is a highly integrated SOC ,which include Front –end demodulator , DTV backend decoder and TV controller. MT5382 support transport de-multiplexer,MPEG-2 video decoder,AC3 audio decoder, LVDS transmitter, and TV decoder.

The MT5382 enables consumer electronics manufactures to build high quality, feature-rich DTV.

MT5382 embedded the MDDi de-interlacer to generate very smooth picture quality for motion. 3D com filter also recovery high detail for still picture. The special color processing technology provides favorite and natural color for TV.

To enrich the features of DTV,MT5382 support HDMI receiver, integrated with high speed VGA ADC, high resolution Video/Audio ADC, 90dB Audio DAC and 12-bit Video DAC. It will provide very fine quality for TV.

2. Feature Description

The combo tuner support both NTSC and ATSC RF signal ,

For the analog part , it build in analog video demodulator , decode the analog RF signal to CVBS , and deliver this CVBS signal to MT5382 for further video processing . and at the same time deliver the 2nd IF signal , fed to MT5382 for audio demodulator and further audio processing .

For Digital part , It also deliver IF signal , fed to MT5382 for further processing

MT5382 merge MT5112 channel decoder , it is designed to support 8 VSB in full compliance with ATSC terrestrial Digital Television Standard . its basic function is to recover the digital data encoded into the broadcast signal , which include video and audio program information and ancillary data service . the device outputs the demodulated data as a standard MPEG-2 transport stream in within parallel or serial format .

It also support free QAM with cable system

The MT5382 platform support different source :

AV1/AV2 support two YPbPr component inputs , they can support SD/HD format

Side AV support CVBS , YC signal share with same audio

HDMI support HDMI / DVI input , the DVI audio share with side AV connector

All the input source video signal will directly fed to MT5382 for video part further processing

MT5382 merge Codec IC , so the audio signal also will fed to MT5382 directly , the audio signal fed to build in MUX , select and digitalize , then fed these audio data to next block for audio processing

MT5382 also support DAC , it can transfer the processing digital audio data to analog signal then fed to audio amplifier . it need extra headphone amplifier , in case need support headphone signal to earphone .

The MT5382 support dual channel LVDS signal , connect these LVDS signal to panel for display picture

[2] MAJOR IC INFORMATION

2.1 U400（MT5382 AR）

GENERAL DESCRIPTION

The **MediaTek MT5382AR** consists of a DTV front-end demodulator, a backend decoder and a TV controller and offers high integration for advanced applications. It combines a transport de-multiplexer, a high definition MPEG-2 video decoder, an AC3 audio decoder, an LVDS transmitter, and an NTSC/PAL/SECAM TV decoder with a 3D comb filter. The MT5382AR enables consumer electronics manufactures to build high quality, low cost and feature-rich iDTVs.

World-Leading Audio/Video Technology: The MT5382AR family has built-in high resolution and high-quality audio codec. It includes MediaTek MDDiTM de-interlace solution to generate very smooth picture quality for motions. A 3D comb filter added to the TV decoder recovers great detail for still pictures.The special color processing technology provides natural, deep colors and true studio quality graphics.

Rich Features for High Value Products: The MT5382AR enables a true single-chip experience. It integrates high-quality HDMI1.3, high speed VGA ADC,dual-channel LVDS, USB2.0 receiver and multi-media decoder.

Reliable Front-end Receiving Capability: Excellent adjacent and co-channel rejection capability grants customers never miss any wonderful stream.

Professional error-concealment provides stable, smooth and mosaic-free video quality.

Key Features:

- ATSC demodulator
- An transport demultiplexer
- An MPEG2 video decoder
- An AC3 audio decoder
- HDMI1.3 receiver
- Audio codec

FEATURES

Host CPU

- ARM 926EJS
- 8K I-Cache and 8K D-Cache
- 4K Instruction TCM
- JTAG ICE interface
- Watch Dog timers
- Built-in CPI analyzer

Transport Demultiplexer

- Supports a serial or parallel transport stream input
- Supports ATSC, MPEG-2 transport stream input
- Supports DES/3-DES
- Up to 8-PID even/odd keys for descrambling
- Supports 32 PID filters and 32 section filters
- Supports positive/negative/mask section filtering
- Supports hardware CRC-32 check
- Supports PCR recovery function
- Supports a micro-processor for stream process and MPEG start code detection

MPEG2/JPEG Decoder

- Supports one MPEG-2 HD decoder
- MPEG MP@ML, MP@HL and MPEG-1 video standards
- The MT5382AR supports de-blocking filter
- The MT5382AR supports JPEG decode base-line JPEG file

2D Graphics

- Supports multiple color modes
- Point, horizontal/vertical line primitive drawings
- Rectangle fill and gradient fill functions
- Bitblt with transparent options
- Alpha blending and alpha composition Bitblt
- Stretch Bitblt
- Font rendering by color expansion
- YCbCr to RGB color space conversion
- Supports off-line scaler

OSD Plane

- Two linking list OSDs with multiple color mode and one of them has scaler

Video Plane

- Supports Video capture and over scan
- Flesh tone management
- gamma/anti-Gamma correction
- Color transient improvement(CTI)
- 2D peaking
- Saturation/hue adjustment
- Brightness and contrast adjustment
- Black and white level extender
- Adaptive luma/Chroma managemeng

- Automatic detect film or video source
- 3:2/2:2 pull down source detection
- The MT5382AR supports maximum 1920 width motion-adaptive de-interlace. The MT5382AR supports excellent low angle image processing.
- Arbitrary ratio vertical/horizontal scaling of video, from 1/32X to 32X
- Advanced non-linear panorama scaling.
- Programmable zoom viewer
- Progressive or interlace scan output
- Supports alpha blending
- Dithering processing for flat panel display
- Frame rate conversion.
- The MT5382AR supports FHD panel and VGA dot-to-dot.
- Doesn't support PIP/POP

LVDS

- Supports 6/8/10-bit one–channel or 6/8-bit dual-channel LVDS transmitter, speeding up to 75 MHz
- Built-in spread spectrum for EMI performance
- Programmable panel timing output

CVBS In

- On-chip 54 MHz 10-bit video ADC
- Supports PAL (B,G,D,H,M,N,I,Nc), NTSC, NTSC-4.43, SECAM
- Macrovision detection
- NTSC/PAL support 3D comb filter, SECAM supports 2D comb filter
- Built-in motion-adaptive 3D Noise Reduction
- VBI data slicer for CC/TT decoding
- Supports 2-S-Video.
- The MT5382AR supports 4-channel CVBS.
- Supports SCART connector

VGA In

- Supports VGA input up to UXGA 162 MHz
- Supports full VESA standards

Component Video In

- Supports two component video inputs
- Supports 480i / 480p / 576i / 576p / 720p / 1080i / 1080p

Audio line in interface

- The MT5382AR supports 1-bit line in data (two channels)

HDMI Receiver

- The MT5382AR supports mixed 3-channels of HDMI1.3, data rate can be up to 2.25 GHz
- EIA/CEA-861B
- CEC

Audio ADC

- The MT5382AR supports 14-channel (7 R/L pairs) analog audio input.

TV Audio demodulator

- Supports BTSC/EIA-J/A2/NICAM/PAL FM/SECAM world-wide formats
- Standard automatic detection
- stereo demodulation,SAP delodulation
- Mode slection (main/SAP/Stereo)

Audio DAC

- Four on-chip audio DACs (2 R/L pairs) support R/L channel and subwoofer outputs

DRAM Controller

- Supports 64 Mb to 512 Mb DDR DRAM devices
- The MT5382AR supports configurable 16/32-bit data bus interface. The 16-bit address offers up to 64 M bytes space. The 32-bit address offers up to 128 M bytes space.

• Supports DDR1-333, DDR1-400, DDR2-400, DDR2-533, DDR2-667

Audio DSP

• Supports Dolby Digital AC-3 decoding (ATSC)
• MPEG-1 layer I/II decoding (DVB)
• Dolby Prologic II
• Audio output: 7.1ch + 2ch (down mix)
• Pink noise and white noise generator
• Equalizer
• Bass management
• 3D surround processing with virtual surround
• Audio and video lip synchronization
• Supports reverberation
• Automatic volume control
• One SPDIF out
• The MT5382AR supports 5-bit (10-channel) main audio I2S output interface. Each channel is up to 24-bit resolution.
• While internal audio DAC is disabled, the MT5382AR supports 1-bit (2-channel) aux audio I2S output I/F. Each channel is up to 24-bit resolution.

Digital TV Demodulator

• Compliant with ATSC digital television standard
• Supports SCTE DVS-031 and ITU J.83 Annex B digital CATV standard
• Accepts direct IF (44 MHz or 43.75 MHz) and low IF (5.38 MHz)
• NTSC interference rejection capability
• Passes all Brazil fading channel ensembles
• Meets all ATSC/A74 requirements
• Excellent adjacent and co-channel rejection capability, only a single SAW is required
• Dual digital AGC controls for IF and RF, respectively
• Full-digital frequency offset recovery with wide acquisition range ±1 MHz for ATSC and ±250 kHz for CATV reception
• EIA/CEA-909 antenna interface, both mode A, and mode B are supported

Analog TV IF Demodulator

• Supports NTSC M/N standard
• Accepts IF frequency at 45.75 MHz
• Full digital AGC control and carrier recovery

Periopherals

• MT5382 AR has two built-in dedicated UARTs with TxFIFO and one shared UART,one of them has hardware flow control and high speed data transferring
• The MT5382AR has three basic serial interfaces;one is for the tuner ,one is the master for general purpose and the other is the slave for HDMI EDID data.The MT5382AR has two extra slave serial interfaces used for the second and the third HDMI EDID data
• Three PWMs
• The MT5382AR supports up to 2 serial flash or 1 serial flash + 1 NAND flash.
• While NAND Flash is not enabled, the MT5382 AR supports xD/SM, MS/MS-PRO, SD/MMC, and SDHC card reader.
• IR blaster and receiver
• Real-time clock and watchdog controller
• 1-port USB2.0/1.1 host supports USB mass storage class devices.
• Supports five servo ADCs.

IC Outline

• The MT5382AR is 465-pin BGA package.
• 3.3V/1.0V and 2.5V for DDR1,1.5V for DDR2.

2.2 U102(LP2996MRX PSOP-8)

General Description

The LP2996 linear regulator is designed to meet the JEDEC SSTL-2 specifications for termination of DDR-SDRAM. The device contains a high-speed operational amplifier to provide excellent response to load transients. The output stage prevents shoot through while delivering 1.5A continuous current and transient peaks up to 3A in the application as required for DDR-SDRAM termination. The LP2996 also incorporates a V_{SENSE} pin to provide superior load regulation and a V_{REF} output as a reference for the chipset and DIMMs. An additional feature found on the LP2996 is an active low shutdown ($\overline{SD}$) pin that provides Suspend To RAM (STR) functionality. When $\overline{SD}$ is pulled low the V_{TT} output will tri-state providing a high impedance output, but, V_{REF} will remain active. A power savings advantage can be obtained in this mode through lower quiescent current.

Features

- Source and sink current
- Low output voltage offset
- No external resistors required
- Linear topology
- Suspend to Ram (STR) functionality
- Low external component count
- Thermal Shutdown
- Available in SO-8, PSOP-8 or LLP-16 packages

Applications

- DDR-I and DDR-II Termination Voltage
- SSTL-2 and SSTL-3 Termination
- HSTL Termination

23.U103/ U104 (L5985 VFQFPN8)

Description

The L5985 is a step down switching regulator with 2.5A current limited embedded power MOSFET, so it is able to deliver up to 2A DC current to the load depending on the application condition.

The input voltage can range from 2.9V to 18V, while the output voltage can be set starting from 0.6V to V_{IN}. Having a minimum input voltage of 2.9V, the device is suitable for buses staring from for 3.3V bus.

Requiring a minimum set of external components, the device includes an internal 250KHz switching frequency oscillator that can be externally adjusted up to 1MHz.

The QFN package with exposed pad allows reducing the R_{thJA} down to approximately 60°C/W.

Features

- 2A DC output current
- 2.9V to 18V input voltage
- Output voltage adjustable from 0.6V
- 250KHz switching frequency, programmable up to 1MHz
- Internal Soft-start and Inhibit
- Low dropout operation: 100% duty cycle
- Voltage feed-forward
- Zero load current operation
- Over current and thermal protection
- VQFN3x3-8L package

Applications

- Consumer:

STB, DVD, DVD recorder, car audio, LCD TV and monitors

- Industrial:

Chargers, car battery, PLD, PLA, FPGA

- Networking: XDSL, modems, DC-DC modules
- Computer:

Optical storage, hard disk drive, printers, audio/graphic cards

2.4. U351/U352 (HYB18TC256160BF-3S TFBGA-84-55)

Features

The 256-Mbit Double-Data-Rate-Two SDRAM offers the following key features:

- 1.8 V ± 0.1 V Power Supply
- 1.8 V ± 0.1 V (SSTL_18) compatible I/O
- DRAM organizations with 4, 8 and 16 data in/outputs
- Double Data Rate architecture: two data transfers per clock cycle four internal banks for concurrent operation
- Programmable CAS Latency: 3, 4, 5 and 6
- Programmable Burst Length: 4 and 8
- Differential clock inputs (CK and $\overline{CK}$)
- Bi-directional, differential data strobes (DQS and $\overline{DQS}$) are transmitted / received with data. Edge aligned with read data and center-aligned with write data.
- DLL aligns DQ and DQS transitions with clock
- DQS can be disabled for single-ended data strobe operation

- Commands entered on each positive clock edge, data and data mask are referenced to both edges of DQS
- Data masks (DM) for write data
- Posted CAS by programmable additive latency for better command and data bus efficiency
- Off-Chip-Driver impedance adjustment (OCD) and On-Die-Termination (ODT) for better signal quality.
- Auto-Precharge operation for read and write bursts
- Auto-Refresh, Self-Refresh and power saving Power-Down modes
- Average Refresh Period 7.8 µs at a T_{CASE} lower than 85 °C, 3.9 µs between 85 °C and 95 °C
- Programmable self refresh rate via EMRS2 setting
- Programmable partial array refresh via EMRS2 settings
- DCC enabling via EMRS2 setting
- Full and reduced Strength Data-Output Drivers
- 1K page size
- Packages: PG-TFBGA-84
- RoHS Compliant Products[1])
- All Speed grades faster than DDR400 comply with DDR400 timing specifications when run at a clock rate of 200 MHz.

2.5. U600 (TDA8932B)

General Description

The TDA8932B is a high efficiency class-D amplifier with low power dissipation.

The continuous time output power is 2 ´ 15 W in stereo half-bridge application (RL = 4 W) or 1 ´ 30 W in mono full-bridge application (RL = 8 W). Due to the low power dissipation the device can be used without any external heat sink when playing music. Due to the implementation of thermal foldback, even for high supply voltages and/or lower load impedances, the device remains operating with considerable music output power without the need for an external heat sink.

The device has two full-differential inputs driving two independent outputs. It can be used as mono full-bridge configuration (BTL) or as stereo half-bridge configuration (SE).

Features

- Operating voltage from 10 V to 36 V asymmetrical or ±5 V to ±18 V symmetrical
- Mono-bridged tied load (full-bridge) or stereo single-ended (half-bridge) application
- Application without heatsink using thermally enhanced small outline package
- High efficiency and low-power dissipation
- Thermally protected and thermal foldback
- Current limiting to avoid audio holes
- Full short-circuit proof across load and to supply lines (using advanced current protection)
- Switchable internal or external oscillator (master-slave setting)
- No pop noise
- Full-differential inputs

Applications

- Flat panel television sets
- Flat panel monitor sets
- Multimedia systems
- Wireless speakers
- Mini and micro systems
- Home sound sets

2.6. U151 (LD1117DT33TR)

General description

The LD1117 is a LOW DROP Voltage Regulator able to provide up to 800mA of Output Current, available even in adjustable version (Vref=1.25V). Concerning fixed versions, are offered the following Output Voltages: 1.2V,1.8V,2.5V,2.85V, 3.0V 3.3V and 5.0V. The 2.85V type is ideal for SCSI-2 lines active termination. The device is supplied in: SOT-223, DPAK, SO-8, TO-220 and TO-220FM. The SOT-223 and DPAK surface mount packages optimize the thermal characteristics even offering a relevant space saving effect. High efficiency is assured by NPN pass transistor. In fact in this case, unlike than PNP one, the Quiescent Current flows mostly into the load. Only a very common 10µF minimum capacitor is needed for stability. On chip trimming allows the regulator to reach a very tight output voltage tolerance, within ± 1% at 25°C. The ADJUSTABLE LD1117 is pin to pin compatible with the other standard. Adjustable voltage regulators maintaining the better performances in terms of Drop and Tolerance.

2.7. U153/U154 (LD1117DTTR)

General description

The LD1117 is a LOW DROP Voltage Regulator able to provide up to 800mA of Output Current, available even in adjustable version (Vref=1.25V). Concerning fixed versions, are offered the following Output Voltages: 1.2V,1.8V,2.5V,2.85V, 3.0V 3.3V and 5.0V. The 2.85V type is ideal for SCSI-2 lines active termination. The device is supplied in: SOT-223, DPAK, SO-8 and TO-220. The SOT-223 and DPAK surface mount packages optimize the thermal characteristics even offering a relevant space saving effect. High efficiency is assured by NPN pass transistor. In fact in this case, unlike than PNP one, the Quiescent Current flows mostly into the load. Only a very common 10µF minimum capacitor is needed for stability. On chip trimming allows the regulator to reach a very tight output voltage tolerance, within ± 1% at 25°C. The ADJUSTABLE LD1117 is pin to pin compatible with the other standard. Adjustable voltage regulators maintaining the better performances in terms of Drop and Tolerance.

Features

- Low dropout voltage (1V TYP.)
- 2.85V Device performances are suitable for SCSI-2 active termination
- Output current up to 800 mA
- Fixed output voltage of: 1.2V, 1.8V, 2.5V, 2.85V, 3.0V, 3.3V, 5.0V
- Adjustable version availability (Vrel=1.25V)
- Internal current and thermal limit
- Available in ± 1% (at 25°C) and 2% in full temperature range
- Supply voltage rejection: 75dB (typ.)

2.8. U721 (LD39080PT)

General Description

The LD39080 is a fast ultra low drop linear regulator which operates from 2.5V to 6V input supply. A wide range of output options are available. The low drop voltage, low noise, and ultra low quiescent current make it suitable for low voltage microprocessor and memory applications. The device is developed on a BiCMOS process which allows low quiescent current operation independently of output load current.

Features

- 0.8A Guaranteed output current
- Ultra low dropout voltage (150mV typ. @ 0.8A load, 20mV typ. @150mA load)
- Very low quiescent current (1mA typ. @ 0.8A load, 1µA max @ 25°C in off mode)
- Logic-controlled electronic shutdown
- Current and thermal internal limit
- ±1.5% Output voltage tolerance @ 25°C
- Fixed and ADJ output voltages: 1.22V, 1.8V, 2.5V, 3.3V, ADJ.
- Temperature range: -40 to 125°C
- Fast dynamic response to line and load changes
- Stable with ceramic capacitor
- Available in PPAK, DPAK and DFN8 (4x4mm)

2.9. U701/U708/U700/U550(M24C02-WDW6P TSSOP8)

DESCRIPTION

These I²C-compatible electrically erasable programmable memory (EEPROM) devices are organized as 2048/1024/512/256/128 x 8 (M24C16, M24C08, M24C04, M24C02 and M24C01).

In order to meet environmental requirements, ST offers these devices in ECOPACK® packages. ECOPACK® packages are Lead-free and RoHS compliant.

ECOPACK is an ST trademark. ECOPACK specifications are available at: www.st.com.

I²C uses a two-wire serial interface, comprising a bidirectional data line and a clock line. The devices carry a built-in 4-bit Device Type Identifier code (1010) in accordance with the I²C bus definition.

The device behaves as a slave in the I²C protocol, with all memory operations synchronized by the serial clock. Read and Write operations are initiated by a Start condition, generated by the bus master. The Start condition is followed by a device select code and Read/Write bit (RW), terminated by an acknowledge bit.

When writing data to the memory, the device inserts an acknowledge bit during the 9th bit time, following the bus master's 8-bit transmission. When data is read by the bus master, the bus master acknowledges the receipt of the data byte in the same way. Data transfers are terminated by a Stop condition after an Ack for Write, and after a NoAck for Read.

.

FEATURES

- Two-wire I²C serial interface

Supports 400 kHz protocol

- Single supply voltage:
  – 2.5 V to 5.5 V for M24Cxx-W
  – 1.8 V to 5.5 V for M24Cxx-R
  – 1.7 V to 5.5 V for M24Cxx-F
- Write Control input
- Byte and Page Write (up to 16 bytes)
- Random and Sequential Read modes
- Self-timed programming cycle
- Automatic address incrementing
- Enhanced ESD/latch-up protection
- More than 1 million write cycles
- More than 40-year data retention
- Packages
  – ECOPACK® (RoHS compliant)

2.10．U402 (MX25L3205DMI-12G SOP-16)

FEATURES

GENERAL

- Serial Peripheral Interface compatible -- Mode 0 and Mode 3
- 32M:33,554,432 x 1 bit structure or 16,772,216 x 2 bits (two I/O read mode) structure
- 1024 Equal Sectors with 4K byte each (32Mb)
  - Any Sector can be erased individually
- 64 Equal Blocks with 64K byte each (32Mb)
  - Any Block can be erased individually
- Single Power Supply Operation
  - 2.7 to 3.6 volt for read, erase, and program operations
- Latch-up protected to 100mA from -1V to Vcc +1V
- Low Vcc write inhibit is from 1.5V to 2.5V

PERFORMANCE

- High Performance
  - Fast access time: 86MHz serial clock (15pF + 1TTL Load) and 66MHz serial clock (30pF + 1TTL Load)
  - Serial clock of two I/O read mode : 50MHz (15pF + TTL Load), which is equivalent to 100MHz
  - Fast program time: 1.4ms(typ.) and 5ms(max.)/page (256-byte per page)
  - Byte program time: 7us (typical)
  - Continuously program mode (automatically increase address under word program mode)
  - Fast erase time: 60ms(typ.) /sector (4K-byte per sector) ; 0.7s(typ.) /block (64K-byte per block); 25s(typ.) for 32Mb
- Low Power Consumption
  - Low active read current: 25mA(max.) at 86MHz, 20mA(max.) at 66MHz and 10mA(max.) at 33MHz
  - Low active programming current: 20mA (max.)
  - Low active erase current: 20mA (max.)
  - Low standby current: 20uA (max.)
  - Deep power-down mode 1uA (typical)
- Typical 100,000 erase/program cycles

SOFTWARE FEATURES

- Input Data Format
  - 1-byte Command code
- Advanced Security Features
  - Block lock protection

  The BP0-BP3 status bit defines the size of the area to be software protection against program and erase instructions
  - Additional 512-bit secured OTP for unique identifier
- Auto Erase and Auto Program Algorithm
  - Automatically erases and verifies data at selected sector
  - Automatically programs and verifies data at selected page by an internal algorithm that automatically times the program pulse widths (Any page to be programed should have page in the erased state first)
- Status Register Feature
- Electronic Identification
  - JEDEC 1-byte manufacturer ID and 2-byte device ID

- RES command for 1-byte Device ID
- Both REMS and REMS2 commands for 1-byte manufacturer ID and 1-byte device ID

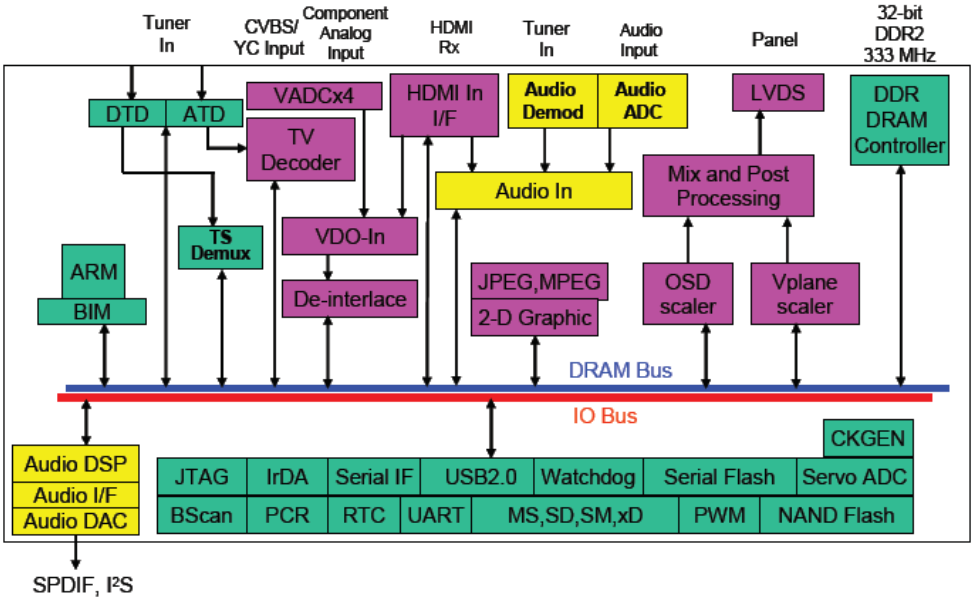
HARDWARE FEATURES

- SCLK Input
  - Serial clock input
- SI Input
  - Serial Data Input
- SO Output
  - Serial Data Output
- WP#/ACC pin
  - Hardware write protection and program/erase acceleration
- HOLD# pin
  - pause the chip without diselecting the chip
- PACKAGE
  - 16-pin SOP (300mil)
  - 8-land WSON (8x6mm or6x5mm)
  - 8-pin SOP (200mil, 150mil)
  - 8-pin PDIP (300mil)
  - All Pb-free devices are RoHS Compliant

3. Detailed ICs Information

3.1. U400（MT5382 AR）

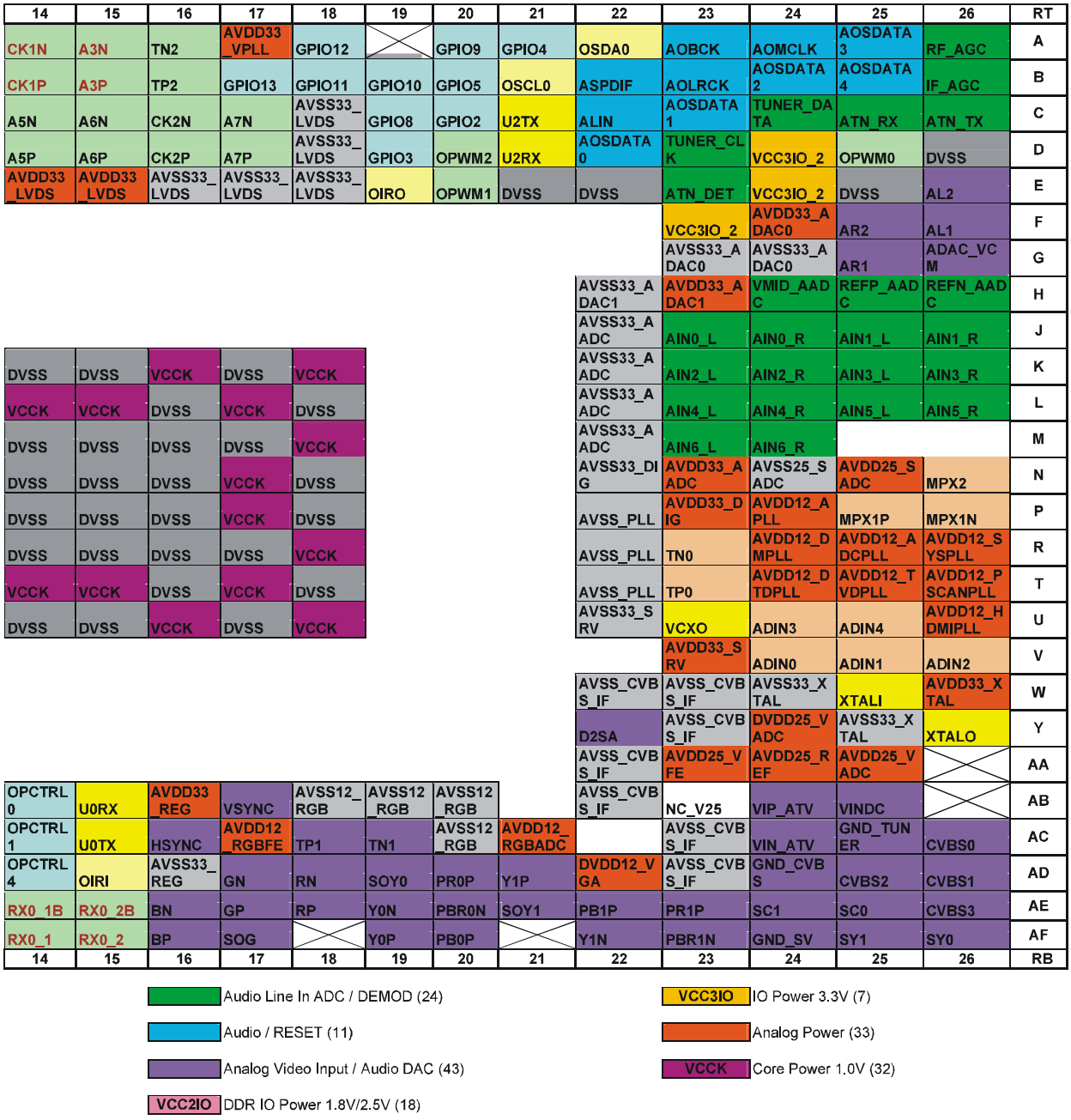
3.1.1 Block Diagram



3.1.2 Pin Connections and short description

LT	1	2	3	4	5	6	7	8	9	10	11	12	13
A		VCC2IO	VCCK	VCCK	JTRST_	JTDO	JTMS	POOE_		PDD7	A0N	A1N	A2N
B	REXTUP	VCC2IO	VCC2IO	VCCK	VCCK	JTCK	JTDI	POCE1_	PDD2	PDD6	A0P	A1P	A2P
C	RDQ3	REXTDN	VCC2IO	VCC2IO	VCCK	VCCK	VCCK	POCE0_	PDD1	PDD5	PAALE	GPIO1	A4N
D	RDQ6	RDQ1	RDQ4	VCC2IO	VCC2IO	VCCK		JRTCK	PDD0	PDD4	PACLE	GPIO0	A4P
E	DVSS	RDQ5	RDQ0	RDQ7	VCC2IO	VCC2IO			POWE_	PDD3	PARB_	AVDD33_ LVDS	AVDD33_ LVDS
F		RDQS0_	RDQS0	RDQ2	DVSS	VCC2IO				VCC3IO_ 3	VCC3IO_ 3		
G	RDQ12	RDQS1_	RDQS1	RDQM1	RDQM0								
H	VCC2IO	RDQ8	RDQ15	RDQ11	VCC2IO	DVSS							
J		RDQ13	RDQ10	RDQ9	VCC2IO								
K	RRAS_	RCLK0_	RCLK0	RODT	RDQ14	DVSS					VCCK	DVSS	VCCK
L	RCAS_	RA11	RCS_	RA0	DVSS						DVSS	VCCK	DVSS
M		RA2	RA6	VCC2IO	RA4	RA8					VCCK	DVSS	DVSS
N	RA5	RA9	RA1	RA10	VCC2IO						DVSS	VCCK	DVSS
P	RA7	RA3	RA12	RBA0	RBA1	RWE_					DVSS	VCCK	DVSS
R		RVREF	RVREF	RCKE	DVSS						VCCK	DVSS	DVSS
T	RDQ19	RDQ20	RDQ17	DVSS	RDQ23	RDQ21					DVSS	VCCK	DVSS
U	RDQ22	RDQ18	RDQ16	RDQM2	VCC2IO						VCCK	DVSS	VCCK
V		RDQS2	RDQS2_	VCC2IO	RDQS3	RDQS3_							
W	VCC2IO	RDQ28	RDQ24	RDQ26	DVSS								
Y	RDQ27	RDQ25	RDQ30	DVSS	GPIO6								
AA		RDQM3	RDQ31	GPIO7	VCC3IO_ 1								
AB	DVSS	RDQ29	OSCL1	VCC3IO_ 1	AVDD33_ USB		OPWR1_5 V	AVDD12_ CVCC					C_XREG
AC	RCLK1_	RCLK1	OSDA1	AVDD12_ USB	ORESET_	OPWR2_5 V	OPCTRL3	EXT_RES	AVSS33_ HDMI	AVSS33_ HDMI	AVSS33_ HDMI	AVDD33_ HDMI	OPCTRL5
AD	OSCL2	OSDA2	AVSS33_ USB	AVSS12_ USB	OPWRSB	OPWR0_5 V	OPCTRL2		AVSS33_ HDMI	AVSS33_ HDMI	AVSS33_ HDMI	AVDD33_ HDMI	
AE	OWRP2	OSDA3	USB_DM	RX2_CB	RX2_0B	RX2_1B	RX2_2B	RX1_CB	RX1_0B	RX1_1B	RX1_2B	RX0_CB	RX0_0B
AF	OSCL3	USB_VRT	USB_DP	RX2_C	RX2_0	RX2_1	RX2_2	RX1_C	RX1_0	RX1_1	RX1_2	RX0_C	RX0_0
LB	1	2	3	4	5	6	7	8	9	10	11	12	13

DDR SIGNAL (73)
Serial / NAND Flash / I2C / Infrared (26)
GPIO / Power Management / USB (27)
JTAG / UART / Crystal / Regulator (14)
HDMI / PWM / LVDS (50)
Servo ADC Input / TV Audio ADC (10)
DVSS
Digital GND (54)
Analog GND (40)



3.2. U102 (LP2996MRX PSOP-8)

3.2.1 Pin Connections and short description

SO-8 Pin or PSOP-8 Pin	LLP Pin	Name	Function
1	2	GND	Ground
2	4	$\overline{SD}$	Shutdown
3	5	VSENSE	Feedback pin for regulating V_{TT}.
4	7	VREF	Buffered internal reference voltage of $V_{DDQ}/2$
5	8	VDDQ	Input for internal reference equal to $V_{DDQ}/2$
6	10	AVIN	Analog input pin
7	11, 12	PVIN	Power input pin
8	14, 15	VTT	Output voltage for connection to termination resistors
-	1, 3, 6, 9, 13, 16	NC	No internal connection

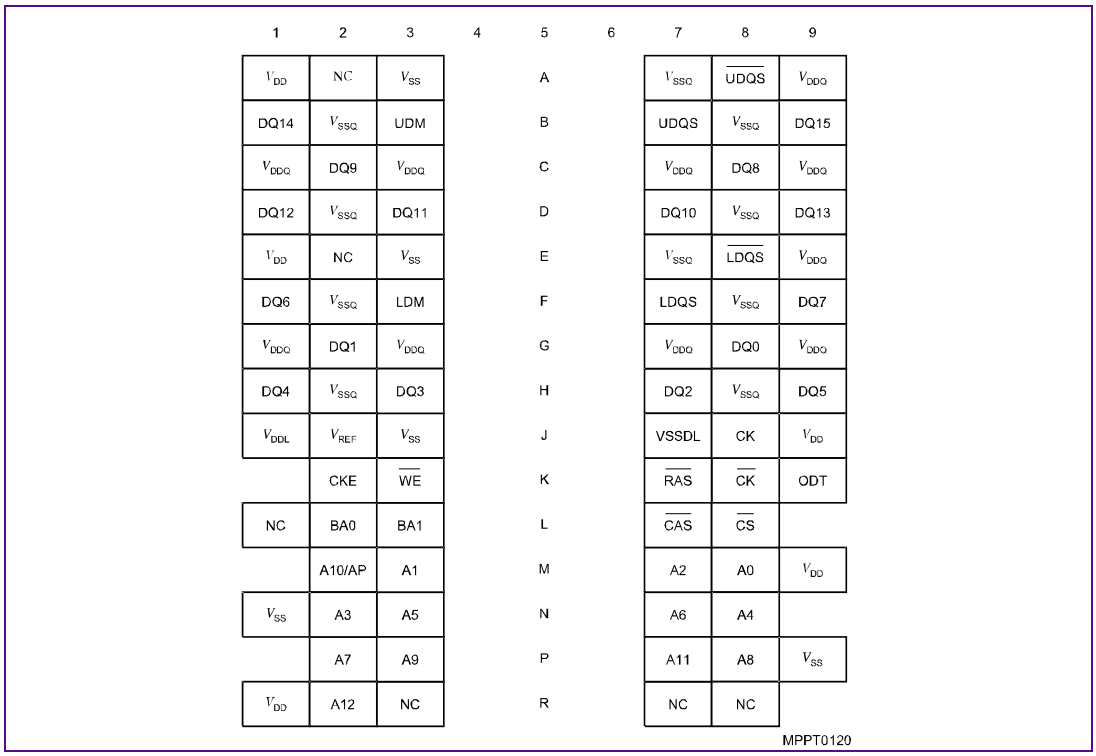
3.3. U104/U103 (L5985 VFQFPN8)

3.3.1 Pin Connections and short description

N°	Type	Description
1	OUT	Regulator output
2	SYNCH	Master/Slave Synchronization. When it is left floating, a signal with a phase shift of half a period respect to the power turn on is present at the pin. When connected to an external signal at a frequency higher than the internal one, then the device is synchronized by the external signal, with zero phase shift. Connecting together the SYNC pin of two devices, the one with higher frequency works as master and the other one as slave; so the two power turn on have a phase shift of half a period.
3	INH	A logical signal (active high) disable the device. With INH higher than 1.9V the device is OFF and with INH lower than 0.6V the device is ON.
4	COMP	Error Amplifier output to be used for loop frequency compensation
5	FB	Feedback input. Connecting the output voltage directly to this pin the output voltage is regulated at 0.6V. To have higher regulated voltages an external resistor divider is required from Vout to FB pin.
6	F_{SW}	The switching frequency can be increased connecting an external resistor from FSW pin and ground. If this pin is left floating the deice works at its free-running frequency of 250KHz.
7	GND	Ground
8	V_{CC}	Unregulated DC input voltage

3.4. U351/U352 (HYB18TC256160BF-3S TFBGA-84-55)

3.4.1 Pin Connections and short description

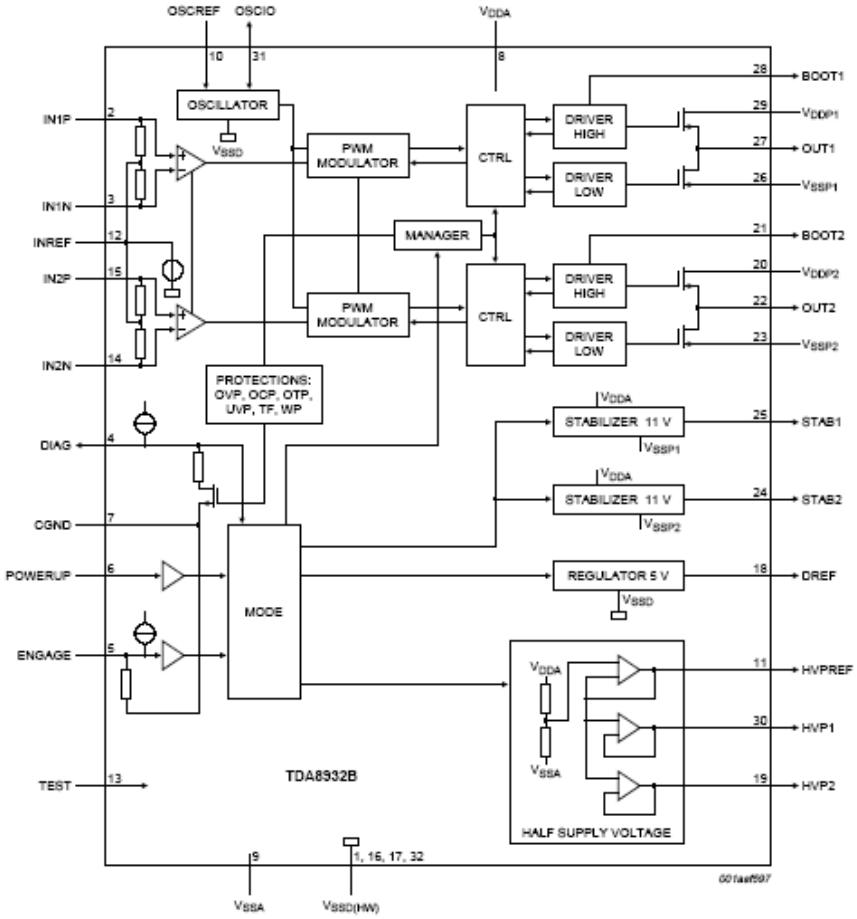


Ball#/Pin#	Name	Pin Type	Buffer Type	Function
Data Signals ×16 Organization				
G8	DQ0	I/O	SSTL	Data Signal 15:0
G2	DQ1	I/O	SSTL	
H7	DQ2	I/O	SSTL	
H3	DQ3	I/O	SSTL	
H1	DQ4	I/O	SSTL	
H9	DQ5	I/O	SSTL	
F1	DQ6	I/O	SSTL	
F9	DQ7	I/O	SSTL	
C8	DQ8	I/O	SSTL	
C2	DQ9	I/O	SSTL	
D7	DQ10	I/O	SSTL	
D3	DQ11	I/O	SSTL	
D1	DQ12	I/O	SSTL	
D9	DQ13	I/O	SSTL	
B1	DQ14	I/O	SSTL	
B9	DQ15	I/O	SSTL	
Data Strobe ×16 Organization				
B7	UDQS	I/O	SSTL	Data Strobe Upper Byte
A8	$\overline{UDQS}$	I/O	SSTL	
F7	LDQS	I/O	SSTL	Data Strobe Lower Byte

E8	$\overline{\text{LDQS}}$	I/O	SSTL	
Data Mask ×16 Organization				
B3	UDM	I	SSTL	Data Mask Upper/Lower Byte
F3	LDM	I	SSTL	
Power Supplies ×16 Organization				
J2	V_{REF}	AI	—	I/O Reference Voltage
E9, G1, G3, G7, G9	V_{DDQ}	PWR	—	I/O Driver Power Supply
J1	V_{DDL}	PWR	—	Power Supply
E1, J9, M9, R1	V_{DD}	PWR	—	Power Supply
E7, F2, F8, H2, H8	V_{SSQ}	PWR	—	I/O Driver Power Supply
J7	V_{SSDL}	PWR	—	Power Supply
A3, 3,J3,N1,P9	V_{SS}	PWR	—	Power Supply
Not Connected ×16 Organization				
A2, E2, L1, R3, R7, R8	NC	NC	—	Not Connected
Other Pins ×16 Organization				
K9	ODT	I	SSTL	On-Die Termination Control

3.5. U600 (TDA8932B)

3.5.1 Block diagram



3.5.1 Pin Connections and short description

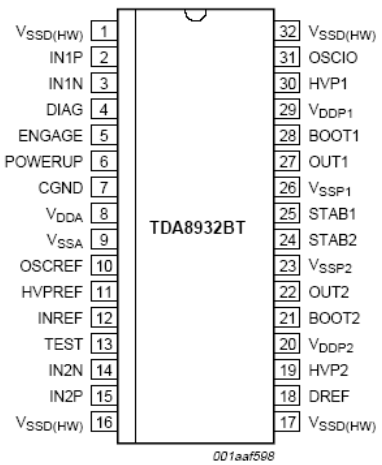


Fig 2. Pin configuration SO32

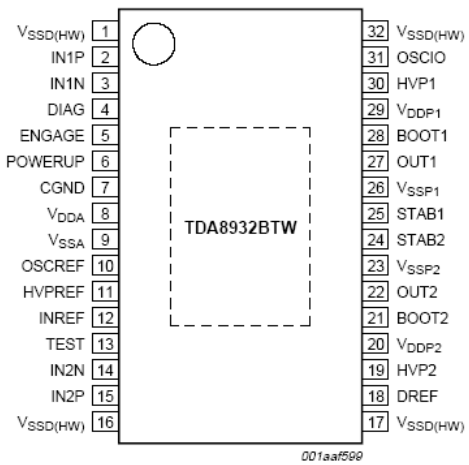
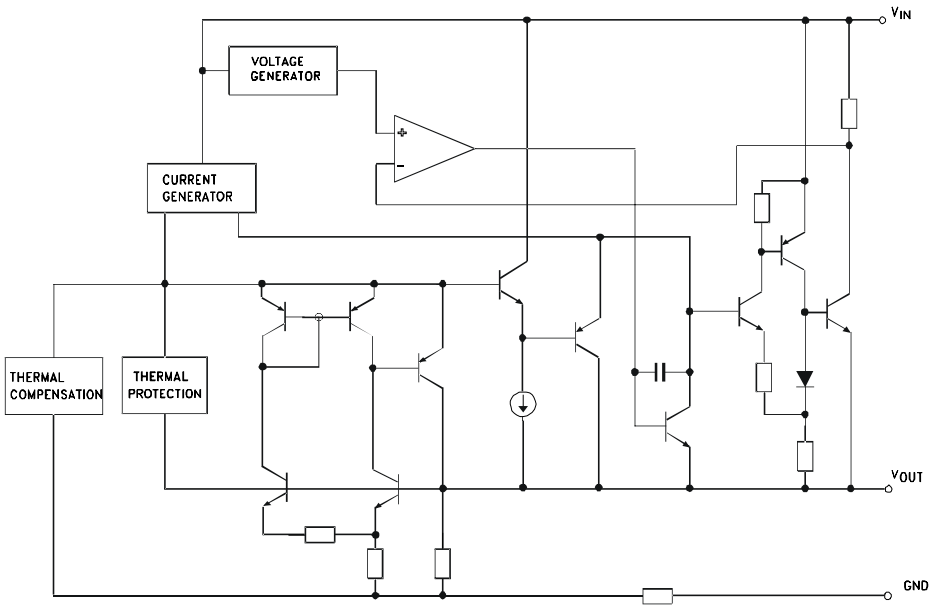


Fig 3. Pin configuration HTSSOP32

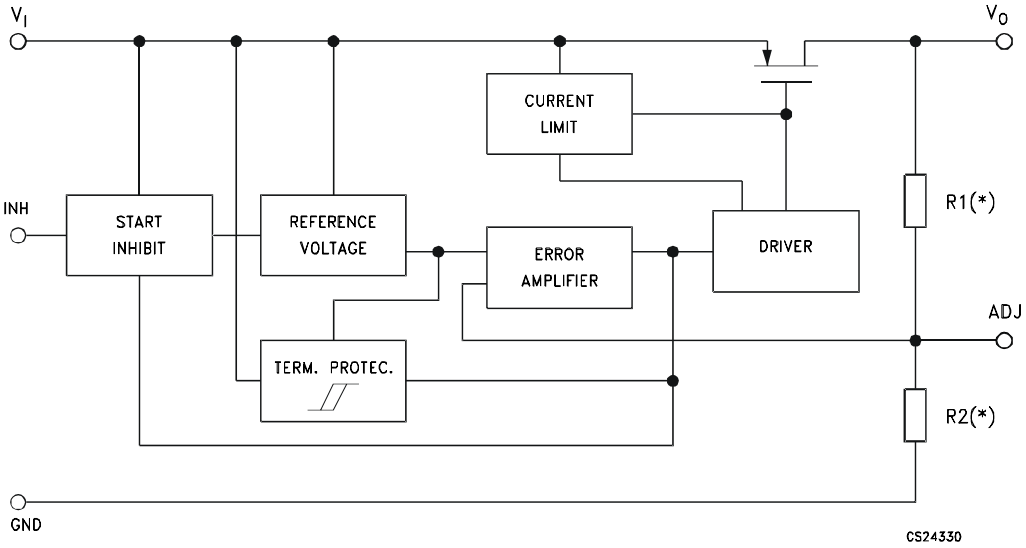
3.6. U151 (LD1117DT33TR)

3.6.1 Block Diagram

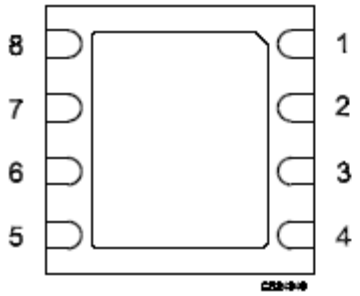


3.7. U721 (LD39080PT)

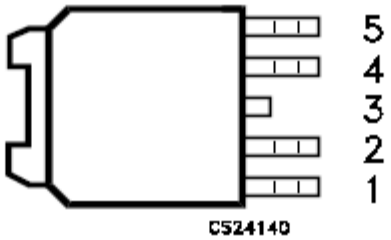
3.7.1 Block Diagram



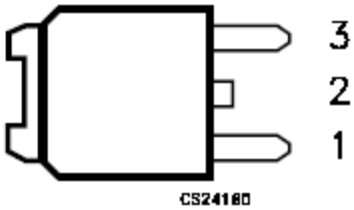
3.7.2 Pin Connections and short description



DFN8 (4x4 mm)



PPAK

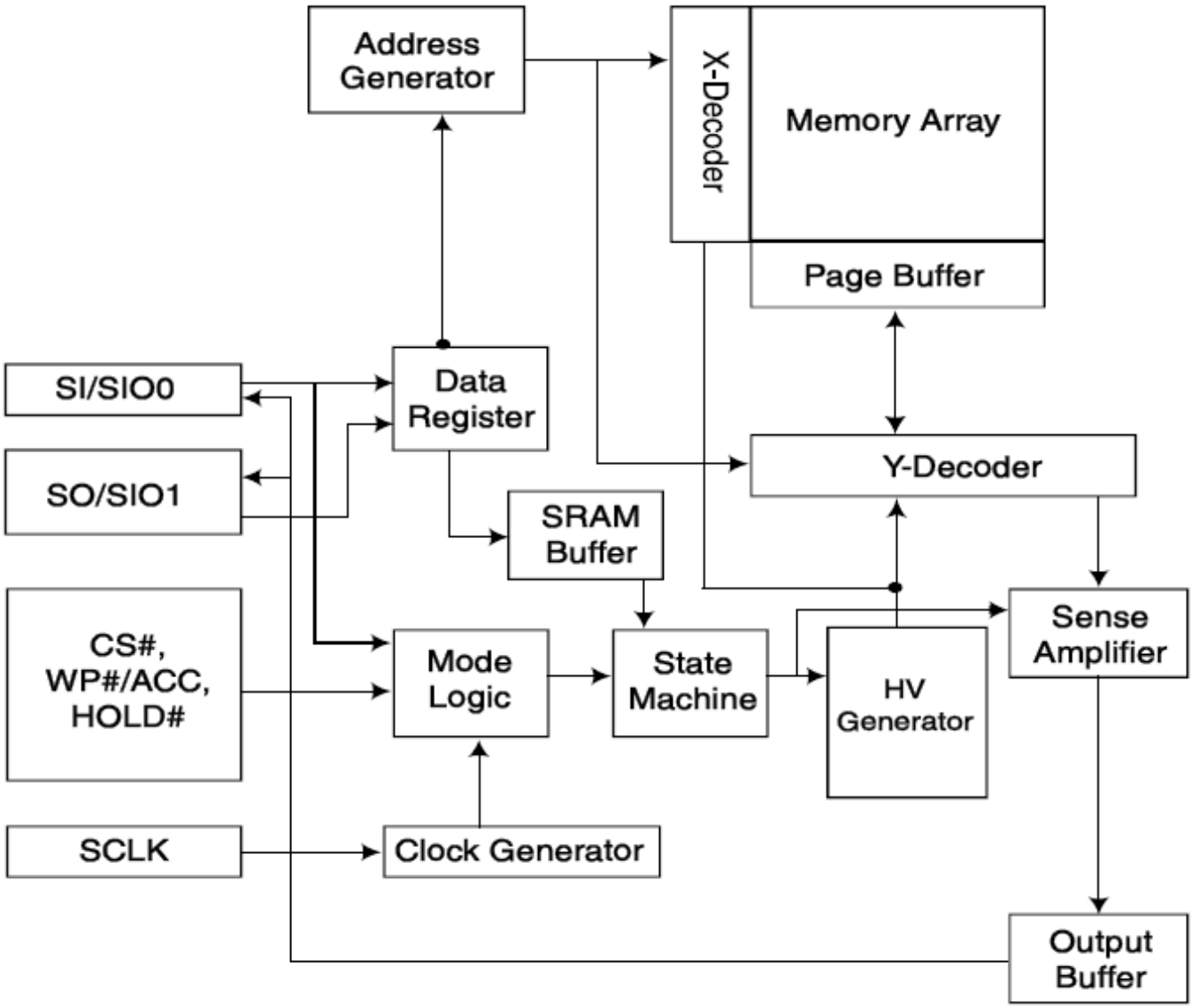


DPAK

Pin N°			Symbol	Note
DFN	PPAK	DPAK		
8	5		V_{SENSE}/N.C.	For fixed versions: to be connected with LDO Output Voltage pins for DFN package and Not Connected on PPAK
			ADJ	For adjustable version: Error Amplifier Input pin for V_O from 1.22 to 5.0V
3, 4	2	1	V_I	LDO Input Voltage; V_I from 2.5V to 6V, C_I=1µF must be located at a distance of not more than 0.5" from input pin.
6, 7	4	3	V_O	LDO Output Voltage pins, with minimum C_O=2.2µF needed for stability (also refer to C_O vs. ESR stability chart)
2	1		V_{INH}	Inhibit Input Voltage: ON MODE when $V_{INH} \geq 2V$, OFF MODE when $V_{INH} \leq$ 0.3V (Do not leave floating, not internally pulled down/up)
1	3	2	GND	Common ground
5			N.C.	Not Connected

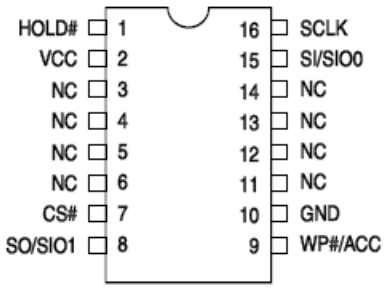
3.8. U402 (MX25L3205DMI-12G SOP-16)

3.8.1 Block Diagram

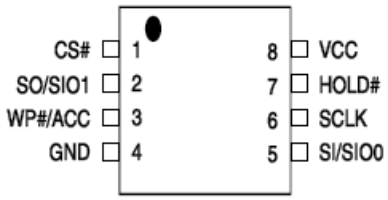


3.8.2 PIN CONFIGURATION

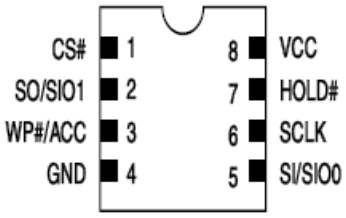
16-PIN SOP (300mil)



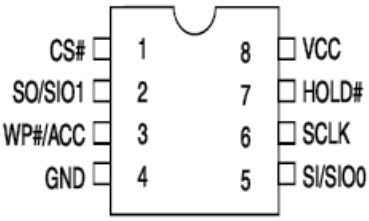
8-PIN SOP (200mil, 150mil)



8-LAND WSON (8x6mm, 6x5mm) for MX25Lxx05D

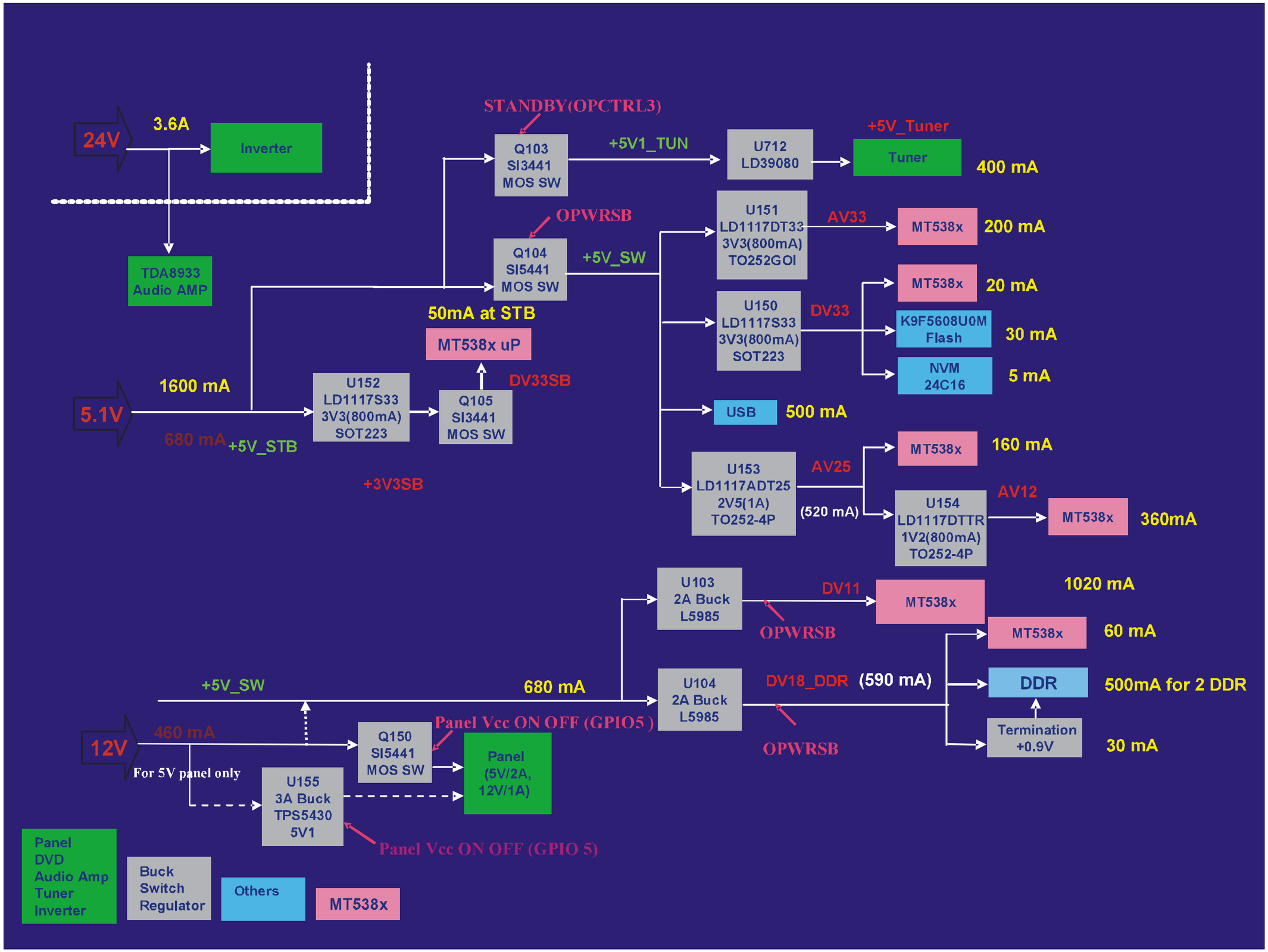


8-PIN PDIP (300mil)

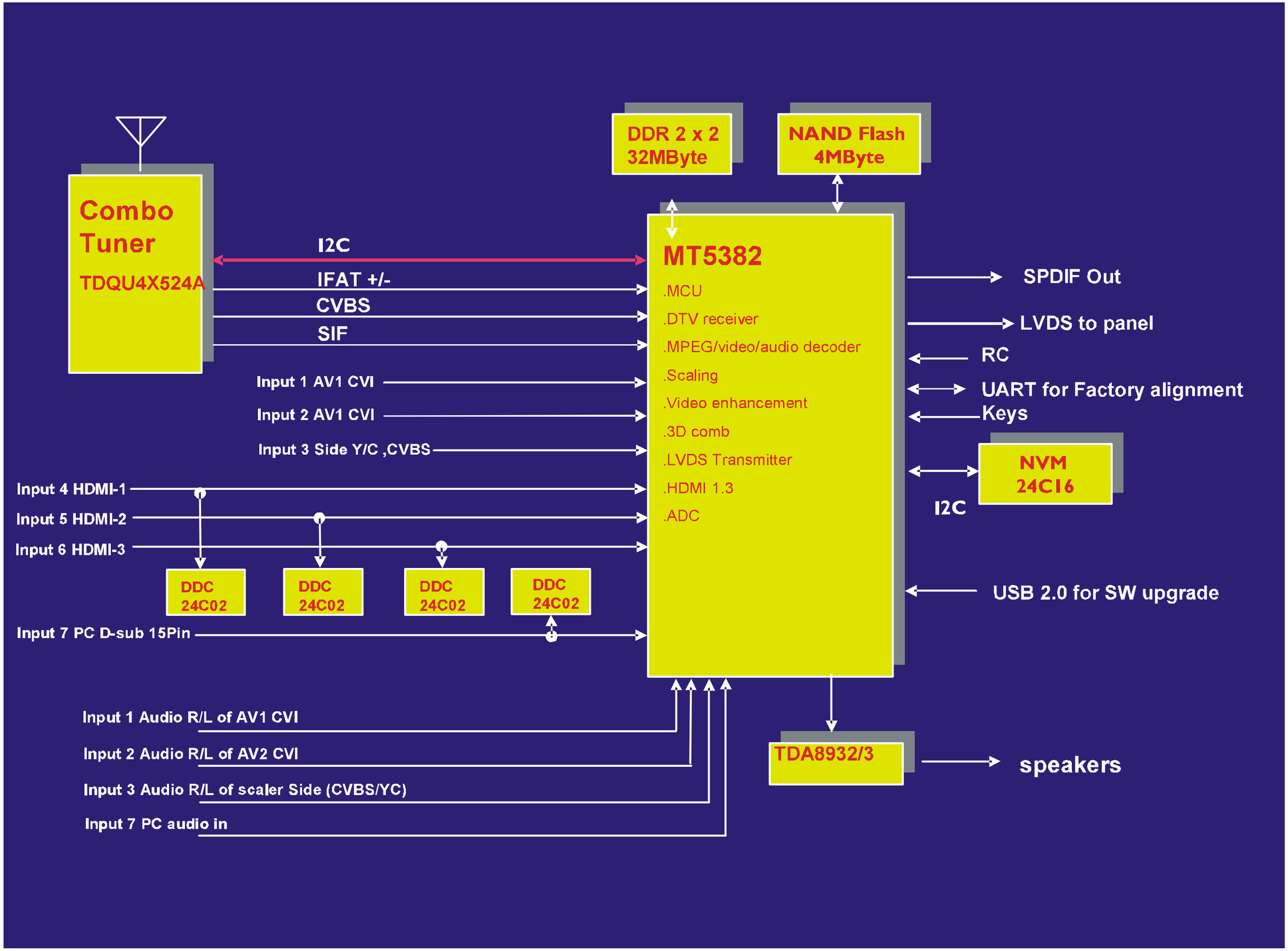


CHAPTER 6. BLOCK DIAGRAM/WIRING DIAGRAM

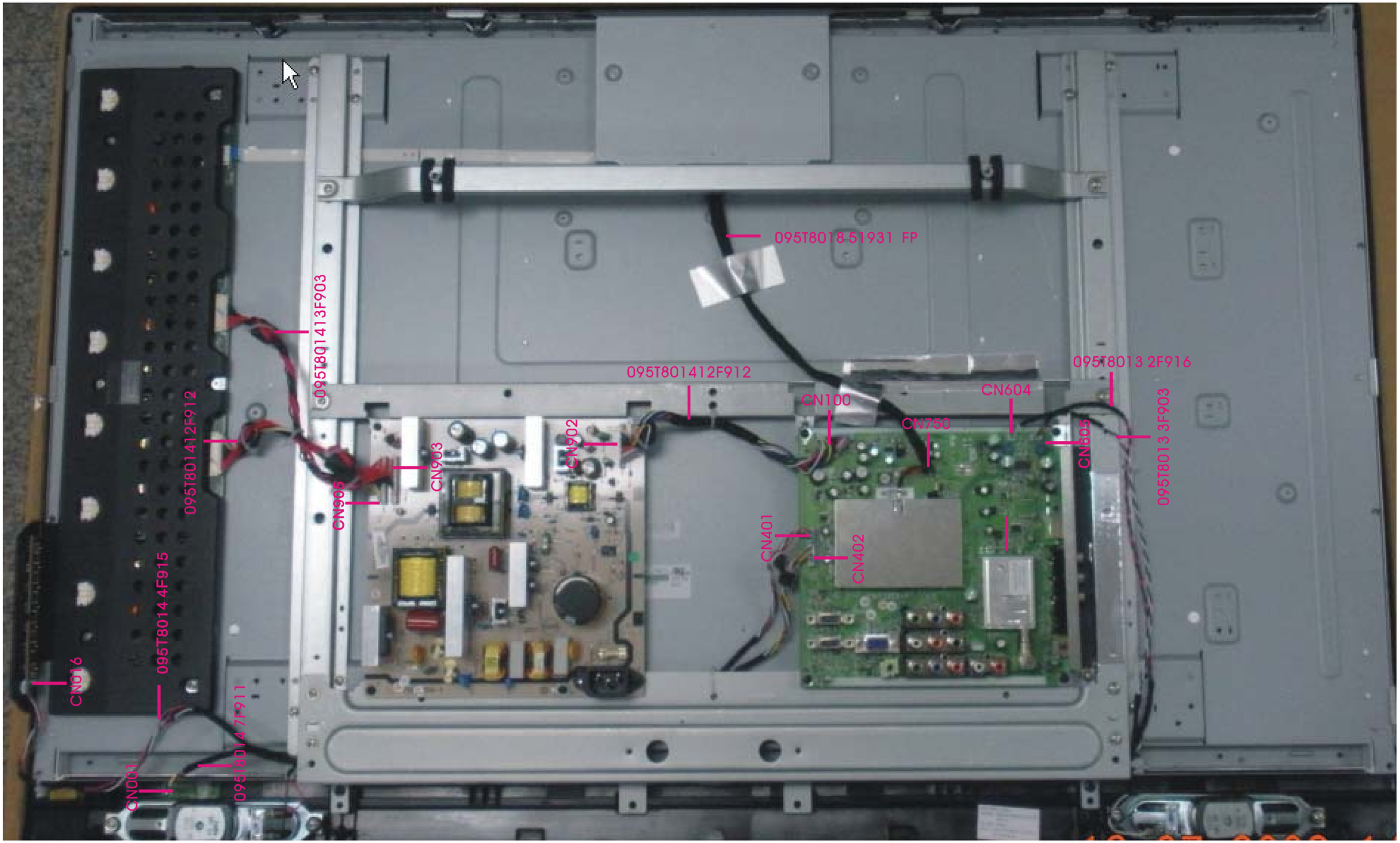
[1] MT5382 POWER MAGAGEMENT BLOCK DIAGRAM



[2] MAIN BOARD BLOCK DIAGRAM



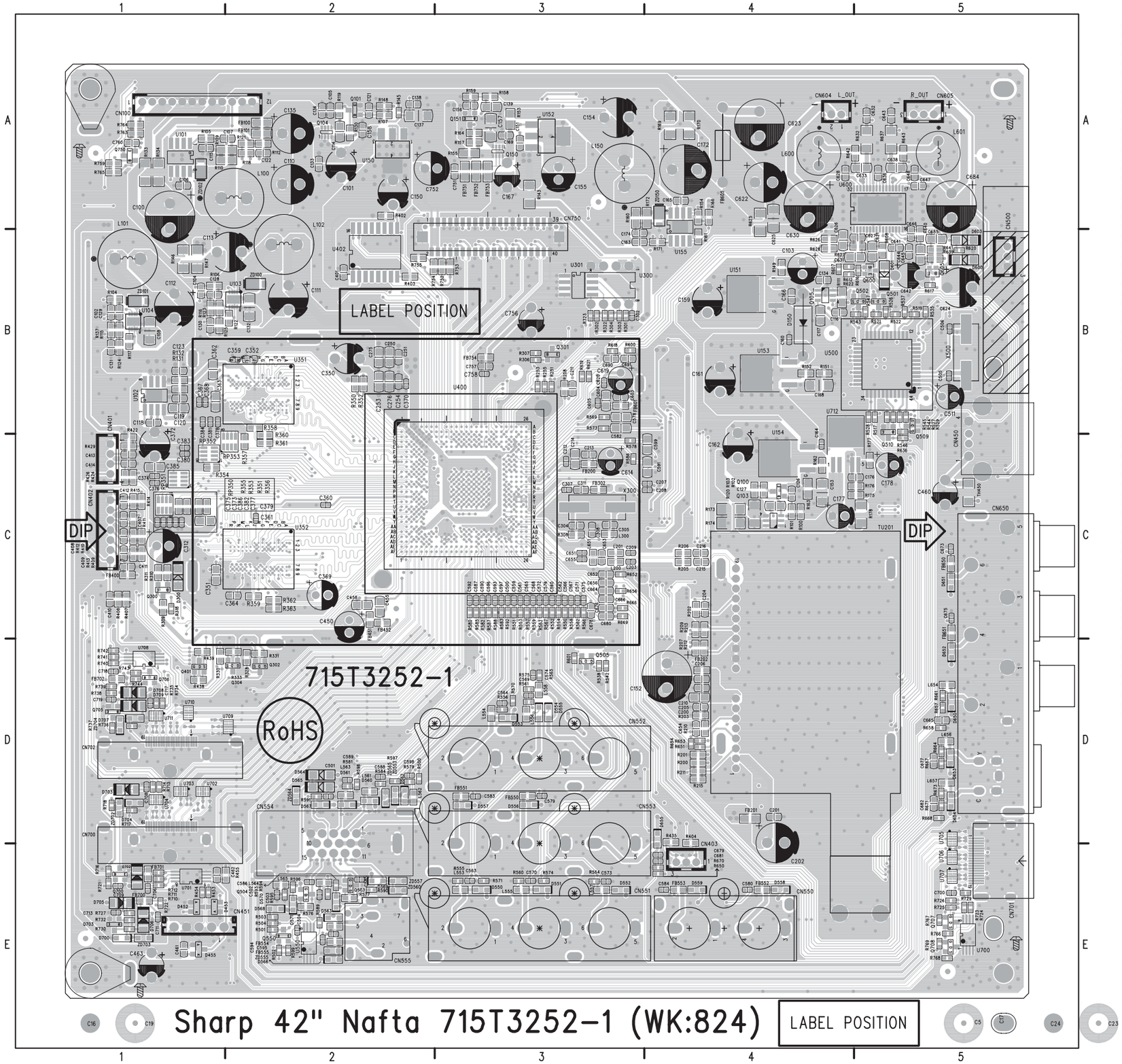
[3] WIRING DIAGRAM



CHAPTER 7. PRINTED WIRING BOARD

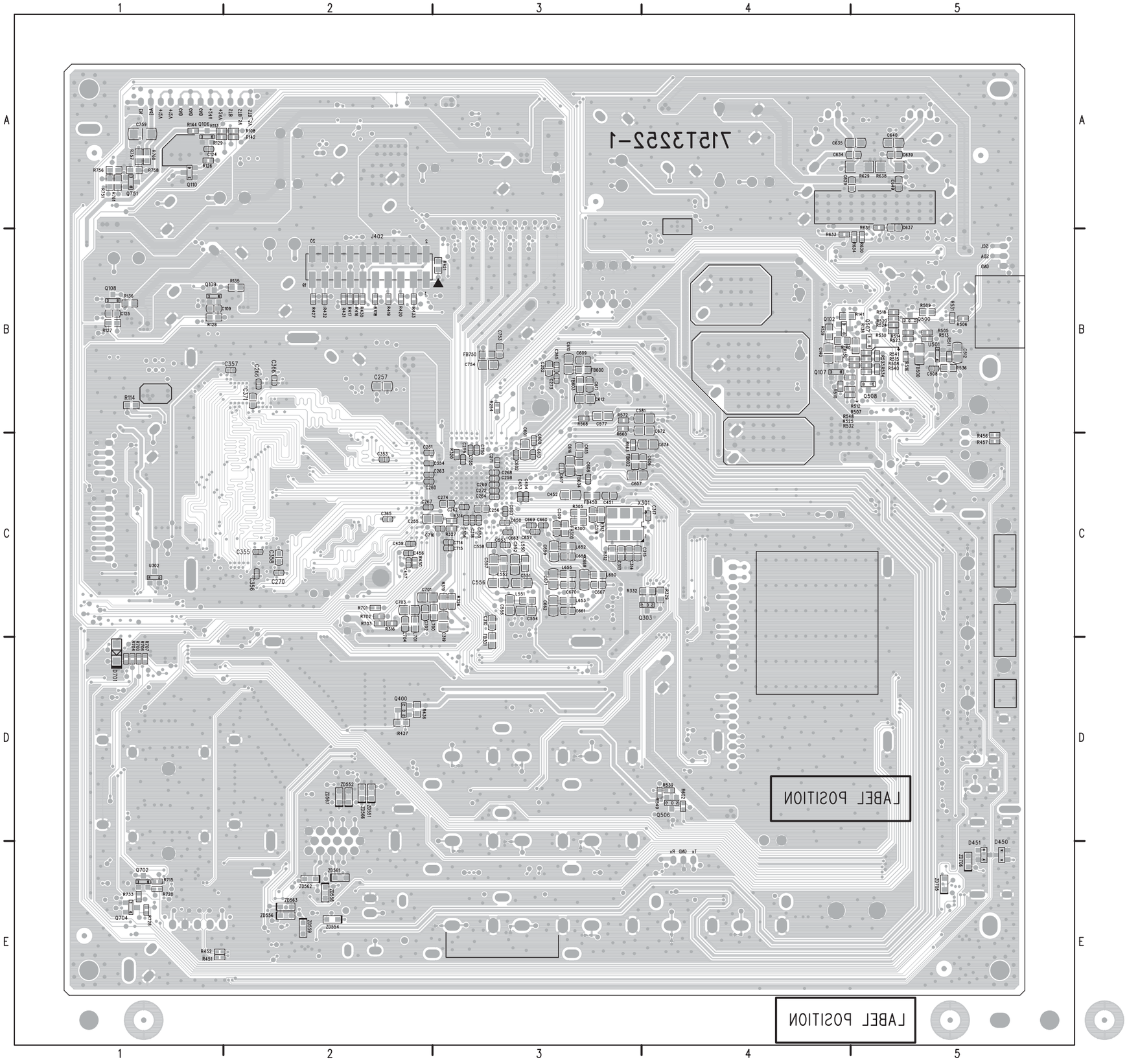
[1] MAIN UNIT PRINTED WIRING BOARD

MAIN Unit (Side-A)



C100	A1	C211	B3	C561	C3	C666	C4	D569	E2	Q103	C4	R163	C5	R422	B1	R593	E2	R741	C
C101	A2	C212	B3	C562	C3	C673	C5	D570	E2	Q104	A2	R164	A3	R424	B1	R594	E2	R742	C
C102	B1	C213	B3	C563	E3	C675	C5	D571	E2	Q105	A5	R166	A4	R426	B1	R595	E2	R743	C
C103	A5	C214	B3	C564	D3	C676	C4	D600	A5	Q150	A3	R169	A4	R429	B1	R596	E2	R744	C
C104	A1	C215	C4	C565	C3	C677	D5	D601	A5	Q151	A3	R170	A4	R435	D4	R597	D2	R752	C
C105	A2	C216	C4	C566	C3	C678	C3	D603	A5	Q300	C1	R171	A4	R438	D1	R598	D2	R753	C
C106	A1	C250	B2	C567	C3	C679	D4	D650	D5	Q301	B3	R172	A4	R439	C1	R599	E2	R754	C
C107	A2	C251	B2	C568	C3	C680	C4	D651	C5	Q302	C2	R173	C4	R453	E2	R600	B4	R755	C
C108	B1	C253	B2	C569	D3	C681	D4	D652	C5	Q304	C2	R174	C4	R454	E1	R601	C3	R759	C
C110	A2	C254	B2	C570	E3	C682	D5	D653	D5	Q401	C1	R175	C5	R455	E2	R607	A5	R763	C
C111	A2	C275	B2	C571	C3	C684	A5	D654	D5	Q501	B5	R176	B5	R500	D3	R608	A5	R764	C
C112	B1	C276	B2	C572	C3	C685	A5	D655	D4	Q502	B5	R177	B5	R501	E2	R612	A5	R765	C
C113	A2	C302	B4	C573	E4	C690	B4	D700	E1	Q503	E2	R178	C5	R502	E2	R616	A5	R766	C
C114	A2	C304	C3	C574	D3	C691	B4	D702	E1	Q504	E2	R200	D4	R503	E2	R617	A5	R767	C
C115	A1	C305	C4	C575	C3	C700	E5	D703	D1	Q505	C3	R201	D4	R504	E2	R618	B4	R768	C
C116	B5	C307	C3	C576	C3	C706	E1	D704	D1	Q509	B5	R202	C4	R517	B5	R619	B3	R769	C
C117	B5	C308	C3	C578	B4	C708	D1	D705	E1	Q510	B5	R203	D4	R519	B5	R620	A5	RP350	C
C118	B1	C311	C3	C579	D3	C709	E1	D706	E1	Q550	E2	R205	C4	R521	B5	R621	B3	RP351	C
C119	B1	C312	C1	C580	E4	C711	E1	D707	D1	Q600	A5	R206	C4	R522	B5	R622	A5	RP352	C
C120	B1	C350	B2	C582	B4	C713	E1	D708	D1	Q605	A5	R207	C4	R526	B5	R625	A4	RP353	C
C121	A2	C351	C2	C583	D3	C717	D1	D709	D1	Q700	E1	R208	B3	R527	B5	R626	A5	TH450	C
C122	A2	C352	B2	C584	E4	C718	C1	FB100	A2	Q703	E1	R209	C4	R528	B5	R627	A5	TU201	C
C123	B1	C359	B2	C585	E2	C719	D1	FB101	A2	Q705	D1	R210	D4	R529	B5	R628	A5	U101	C
C126	C5	C360	C2	C586	E2	C751	A3	FB200	B3	Q706	D1	R211	D4	R535	B5	R632	A5	U102	C
C127	C4	C361	C2	C587	C3	C752	A3	FB201	D4	Q707	E5	R212	C4	R537	B5	R636	B5	U103	C
C128	A2	C362	B2	C588	D2	C756	B3	FB202	C4	Q708	E5	R213	C4	R538	C4	R637	A5	U104	C
C129	B1	C363	B2	C589	D2	C757	B3	FB302	C4	Q750	A1	R215	D4	R542	C4	R639	A5	U150	C
C130	B2	C364	C2	C590	C3	C758	B3	FB400	C1	R100	C5	R251	B3	R543	B5	R640	A5	U151	C
C131	B1	C367	B1	C591	B4	C760	A1	FB451	C2	R101	C5	R253	B3	R544	B5	R641	A5	U152	C
C132	B2	C368	B1	C592	C3	CN100	A1	FB452	C2	R102	C4	R255	B3	R545	B5	R642	A5	U153	C
C133	A2	C369	C2	C593	C3	CN401	B1	FB550	D3	R103	C4	R301	B4	R546	B5	R643	A5	U154	C
C134	A5	C370	B3	C594	E2	CN402	C1	FB551	D3	R104	A1	R302	B4	R547	B5	R650	E4	U155	C
C135	A2	C372	B1	C595	E2	CN403	E4	FB552	E4	R105	A1	R303	B4	R550	C3	R651	D4	U300	C
C136	A2	C373	C1	C596	C3	CN450	B5	FB553	E4	R106	A2	R304	B4	R551	C3	R652	C4	U301	C
C137	A3	C374	B1	C597	C3	CN451	E1	FB554	E2	R107	A2	R306	B3	R552	C3	R653	D4	U351	C
C138	A3	C375	C1	C598	D3	CN500	A5	FB555	E2	R109	A2	R307	B3	R553	C3	R654	D4	U352	C
C139	A3	C376	B1	C599	B4	CN550	E4	FB601	B4	R110	A2	R308	C3	R554	C3	R656	C4	U400	C
C150	A2	C377	C1	C603	B4	CN551	E3	FB605	A4	R111	A5	R309	C1	R555	E3	R657	D5	U402	C
C151	A3	C378	B2	C604	B4	CN552	D3	FB650	C5	R112	A2	R310	C1	R556	D3	R658	D5	U500	C
C152	D4	C379	C1	C605	B4	CN553	D3	FB651	C5	R115	B1	R311	C1	R557	C3	R661	D5	U550	C
C153	C5	C380	B1	C614	B4	CN554	D2	FB700	E1	R116	B2	R318	C1	R558	C3	R664	D5	U600	C
C154	A4	C381	B2	C619	B4	CN555	E2	FB701	E1	R117	B1	R322	B4	R559	C3	R666	C4	U700	C
C155	A3	C382	C1	C620	B4	CN604	A5	FB702	D1	R118	A2	R323	B3	R560	E3	R667	D5	U701	C
C156	A3	C383	B1	C621	A5	CN605	A5	FB751	A3	R119	A2	R328	C2	R561	D3	R668	D5	U702	C
C157	A3	C384	B1	C622	A4	CN650	C5	FB752	A3	R120	C4	R330	C2	R562	C3	R669	C4	U703	C
C158	A2	C385	B1	C623	A4	CN700	D1	FB753	A3	R121	A2	R331	C2	R563	C3	R670	E4	U704	C
C159	A4	C386	C1	C624	A5	CN701	D5	FB754	B3	R122	B2	R333	C2	R564	E4	R671	D5	U705	C
C160	B5	C401	A2	C625	A4	CN702	D1	L100	A2	R123	B2	R350	B2	R565	D3	R673	D5	U706	C
C161	B4	C407	C1	C626	A5	CN750	A3	L101	A1	R124	B1	R351	C1	R566	C3	R710	E1	U707	C
C162	B4	C408	C1	C627	A5	D150	B5	L102	A2	R125	B2	R352	B2	R567	C3	R711	E1	U708	C
C163	A4	C409	C1	C628	A5	D300	C1	L150	A4	R130	A2	R353	C1	R569	B4	R712	E1	U709	C
C164	B5	C410	C1	C630	A5	D452	E1	L200	C4	R131	B1	R354	B2	R570	D3	R713	D1	U710	C
C165	A4	C411	C1	C631	A5	D453	E2	L201	C4	R132	B1	R355	C1	R571	E3	R714	D1	U711	C
C166	A5	C412	C1	C632	A5	D455	E1	L300	C4	R133	A1	R356	C1	R573	B4	R716	E1	U712	C
C167	A3	C413	B1	C633	A5	D550	E3	L553	E3	R134	A1	R357	B2	R574	E3	R717	D1	X300	C
C168	B5	C414	B1	C636	A5	D551	E3	L554	D3	R137	B1	R358	B2	R575	D3	R718	D1	X500	C
C169	A3	C450	C2	C638	A5	D552	E4	L555	E3	R143	A3	R359	C2	R576	E2	R721	E1	ZD100	C
C172	A4	C455	C2	C641	A5	D553	D3	L556	D3	R145	A2	R360	B2	R577	E2	R722	E1	ZD101	C
C174	A4	C458	C2	C642	A5	D554	D3	L557	E4	R146	A1	R361	B2	R578	B4	R723	E5	ZD102	C
C176	B5	C460	C5	C643	A5	D555	D3	L558	D3	R147	A1	R362	C2	R579	D3	R724	E5	ZD150	C
C177	C5	C461	E1	C644	A5	D556	D3	L561	D2	R148	A2	R363	C2	R580	C3	R725	E5	ZD553	C
C178	B5	C462	E2	C645	A5	D557	D3	L562	D3	R149	A4	R402	A2	R581	D2	R726	E5	ZD555	C
C200	D4	C463	E1	C646	A5	D558	E4	L563	D2	R151	B5	R403	A3	R582	C3	R727	E1	ZD557	C
C201	D4	C500	C3	C647	A5	D559	E4	L564	E2	R152	B5	R404	D4	R583	C3	R729	E5	ZD560	C
C202	D4	C501	D2	C648	A5	D560	D2	L565	E2	R153	A3	R407	C1	R584	D2	R730	E1	ZD564	C
C203	C4	C502	E2	C651	C3	D561	D2	L600	A5	R154	A4	R408	C1	R585	C3	R732	E1	ZD565	C
C204	C4	C503	E2	C652	C4	D562	D3	L601	A5	R155	A3	R409	C1	R586	B4	R734	D1	ZD702	C
C205	D4	C504	E2	C653	C4	D563	E2	L651	C3	R157	A3	R410	C1	R587	C3	R735	D1	ZD703	C
C206	D4	C505	B5	C654	D4	D564	D2	L654	D5	R158	A3	R411	C1	R588	C3	R736	D1	ZD704	C
C207	B4	C506	B5	C655	C3	D565	D2	L656	D5	R159	A3	R412	C1	R589	E2	R737	D1		
C208	C4	C511	B5	C656	C4	D566	E2	L657	D5	R160	A4	R413	C1	R590	E2	R738	D1		
C209	C4	C559	C3	C664	C4	D567	D2	Q100	C4	R161	A4	R414	C1	R591	D2	R739	D1		
C210	D4	C560	C3	C665	D5	D568	E2	Q101	A2	R162	B5	R415	C1	R592	C3	R740	C1		

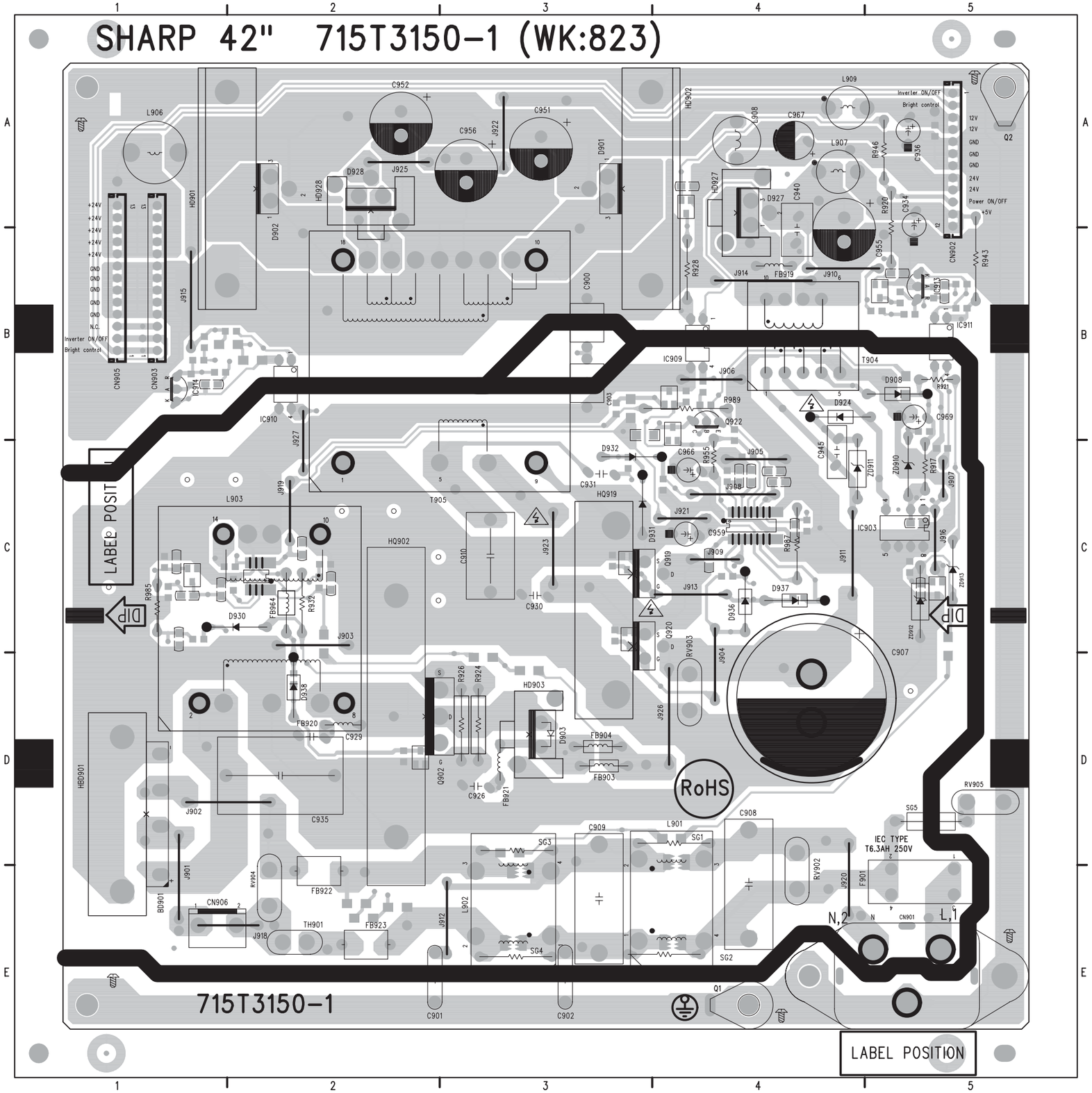
MAIN Unit (Side-B)



C109	B2	C660	C3	R417	A2
C124	A2	C661	C3	R418	A2
C125	B1	C662	C3	R419	A2
C140	B5	C663	C3	R420	A3
C252	B3	C667	C4	R421	A3
C255	C3	C668	C3	R427	A2
C256	C3	C669	C3	R430	A2
C257	B2	C670	C3	R431	A2
C258	B3	C671	C3	R432	A2
C259	B3	C672	B4	R433	A3
C260	B3	C674	B4	R436	D3
C261	B3	C701	C3	R437	D3
C262	C3	C702	C3	R450	C3
C263	B3	C703	C3	R451	E2
C264	C3	C704	C3	R452	E2
C265	B3	C714	C3	R456	B5
C266	B2	C715	C3	R457	B5
C267	C3	C716	C3	R505	B5
C268	B3	C750	B3	R506	B5
C269	B3	C753	B3	R507	B5
C270	C2	C754	B3	R508	B5
C271	B3	C755	B3	R509	B5
C272	C3	C759	A1	R510	B5
C273	B3	D450	D5	R511	B5
C274	C3	D451	D5	R512	B5
C303	C3	D701	C1	R513	B5
C306	C3	FB300	C3	R514	B5
C309	C3	FB301	C3	R515	B5
C310	C3	FB450	C4	R516	B5
C313	C4	FB500	B5	R518	B5
C314	C4	FB600	B3	R520	B5
C315	C4	FB602	B4	R523	B5
C316	C4	FB603	B3	R524	B5
C317	C4	FB604	B3	R525	B5
C318	C3	FB750	B3	R530	B5
C319	C3	J402	A2	R531	B5
C353	B2	L550	C3	R532	B5
C354	B3	L551	C3	R533	B5
C355	C2	L552	C3	R534	B5
C356	C2	L650	C4	R536	B5
C357	B2	L652	C3	R539	D4
C358	C2	L653	C3	R540	B5
C365	C2	L655	C3	R541	B5
C366	B2	L700	C3	R548	B5
C371	B2	L701	C3	R549	D4
C451	C4	Q102	B5	R568	B3
C452	C3	Q106	A2	R572	B4
C453	C3	Q107	B5	R602	D4
C454	C3	Q108	B1	R629	A5
C456	C3	Q109	A2	R630	A5
C457	C3	Q110	A1	R633	A5
C459	C3	Q303	C4	R634	A5
C508	B5	Q400	D3	R635	A5
C512	B5	Q500	B5	R638	A5
C550	C3	Q506	D4	R660	B4
C551	C3	Q507	B5	R663	B4
C552	C3	Q508	B5	R700	C1
C553	C3	Q702	E1	R701	C2
C554	C3	Q704	E1	R702	C2
C555	C3	Q751	A1	R703	C2
C556	C3	R108	A2	R704	C1
C557	C3	R113	A2	R706	C1
C558	C3	R114	B1	R707	C1
C577	B4	R126	A2	R715	E1
C581	B4	R127	B1	R720	E1
C600	B3	R128	B2	R728	E1
C601	B3	R129	A2	R733	E1
C602	B3	R135	A2	R751	A1
C606	B4	R136	B1	R756	A1
C607	B4	R138	B5	R757	A1
C608	B3	R139	B5	R758	A1
C609	B3	R140	B5	R760	A1
C610	B3	R141	B5	R761	A1
C611	B3	R142	A2	U302	C1
C612	B3	R144	A1	U501	B5
C613	B3	R150	B5	X301	C4
C615	B3	R254	B3	ZD551	D2
C616	B3	R300	C3	ZD552	D2
C617	B3	R305	C3	ZD554	E2
C629	A5	R312	C4	ZD556	E2
C634	A5	R313	C4	ZD558	E2
C635	A5	R314	C3	ZD559	E2
C637	A5	R316	C2	ZD561	E2
C639	A5	R319	C3	ZD562	E2
C640	A5	R320	B3	ZD563	E2
C649	A5	R326	C3	ZD566	D2
C650	C3	R327	C3	ZD567	D2
C657	C3	R329	C4	ZD705	E5
C658	C3	R332	C4	ZD706	E5
C659	C3	R416	A2		

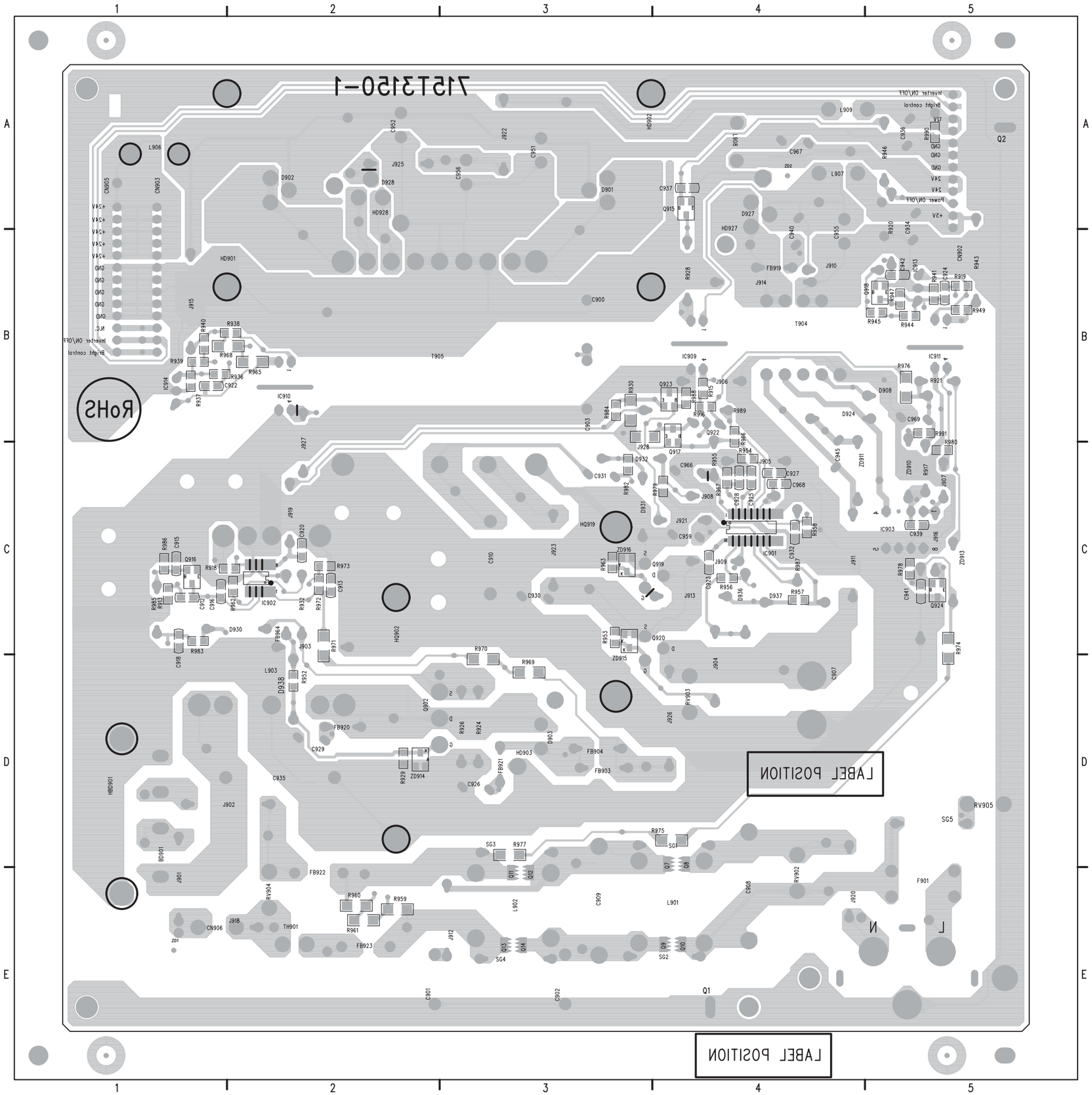
[1]POWER UNIT PRINTED WIRING BOARD

POWER Unit (Side-A)



BD901	D1		
C900	B3	C901	E3
C902	E3	C903	B3
C907	D5	C908	D4
C909	E4	C910	C3
C926	D3	C929	D2
C930	C3	C931	B4
C934	A5	C935	D2
C936	A5	C940	A5
C945	B5	C951	A3
C952	A3	C955	A5
C956	A3	C959	C4
C966	B4	C967	A5
C969	B5	CN901	E5
CN902	A5	CN903	A1
CN905	A1	CN906	E2
D901	A4	D902	A2
D903	D3	D908	B5
D924	B5	D927	A4
D928	A2	D930	C1
D931	B4	D932	B4
D936	C4	D937	C5
D938	C2	F901	D5
FB903	D4	FB904	D4
FB919	A4	FB920	D2
FB921	D3	FB922	D2
FB923	E2	FB964	C2
HBD901	D1	HD901	A2
HD902	A4	HD903	D3
HD927	A4	HD928	A2
HQ902	D3	HQ919	C4
IC903	C5	IC909	B4
IC910	B2	IC911	B5
IC913	A5	Ic914	B1
J901	E1	J902	D1
J903	C2	J904	D4
J905	B4	J906	B4
J907	B5	J908	B4
J909	C4	J910	A5
J911	C5	J912	E3
J913	C4	J914	A4
J915	B1	J916	C5
J918	E1	J919	C2
J920	E5	J921	C4
J922	A3	J923	C3
J925	A2	J926	D4
J927	B2	L901	E4
L902	E3	L903	C2
L906	A1	L907	A5
L908	A4	L909	A5
Q902	D3	Q919	C4
Q920	C4	Q922	B4
R917	B5	R920	A5
R921	B5	R924	D3
R926	D3	R928	A4
R932	C2	R943	A5
R946	A5	R955	B4
R985	C1	R987	C5
R989	B4	RV902	D5
RV903	D4	RV904	E2
RV905	D5	SG1	D4
SG2	E4	SG3	D3
SG4	E3	T904	B5
T905	B3	TH901	E2
ZD910	B5	ZD911	B5
ZD912	C5	ZD913	C5

POWER Unit (Side-B)



C912 C1
C913 C2
C915 C1
C916 C2
C918 C1
C920 C2
C922 B2
C923 C4
C924 A5
C925 B4
C927 B4
C928 B4
C932 C5
C937 A4
C939 C5
C941 C5
C942 A5
C968 B4
IC901 C4
IC902 C2
J928 B4
Q915 A4
Q916 C1
Q917 B4
Q918 A5
Q923 B4
Q924 C5
R913 C1
R915 B4
R916 B4
R918 C2
R919 A5
R929 D3
R930 B4
R936 B2
R937 B1
R938 B2
R939 B1
R940 B1
R941 A5
R944 B5
R945 B5
R947 A5
R949 B5
R952 C2
R953 C4
R954 B4
R956 C4
R957 C5
R958 C5
R959 E2
R960 E2
R961 E2
R962 C2
R963 C4
R965 B2
R966 B4
R967 B4
R968 B2
R969 C3
R970 C3
R971 C2
R972 C2
R973 C2
R974 C5
R975 D4
R976 B5
R977 D3
R978 C5
R979 B4
R980 B5
R982 B4
R983 C1
R984 B4
R986 C1
R988 B4
R990 A5
R991 B5
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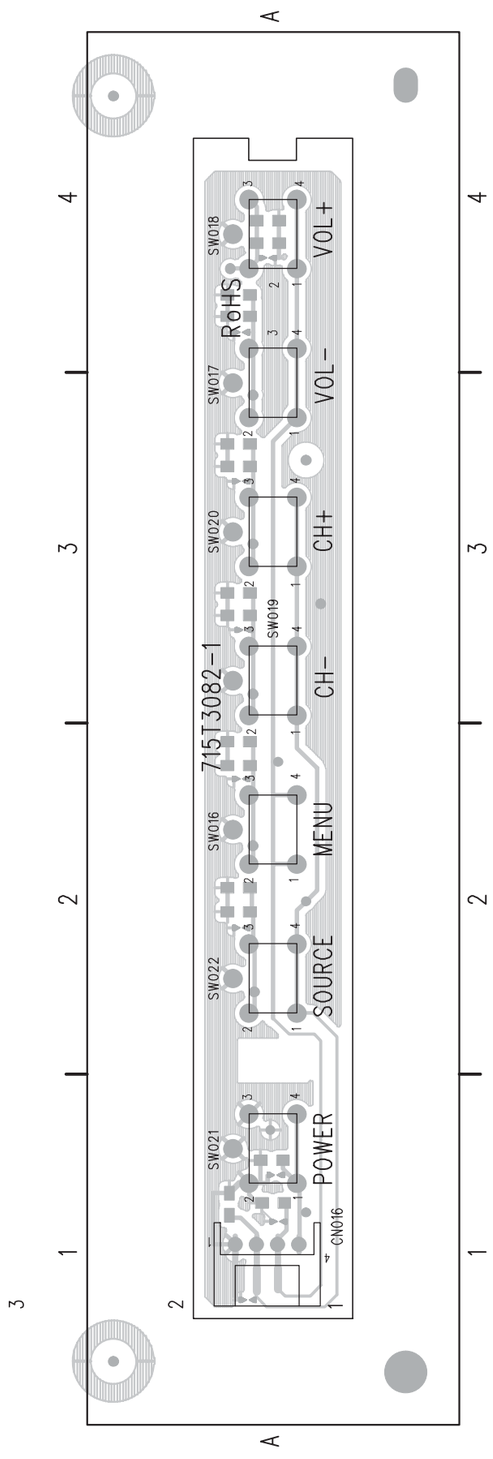
ZD915 C4
ZD916 C4

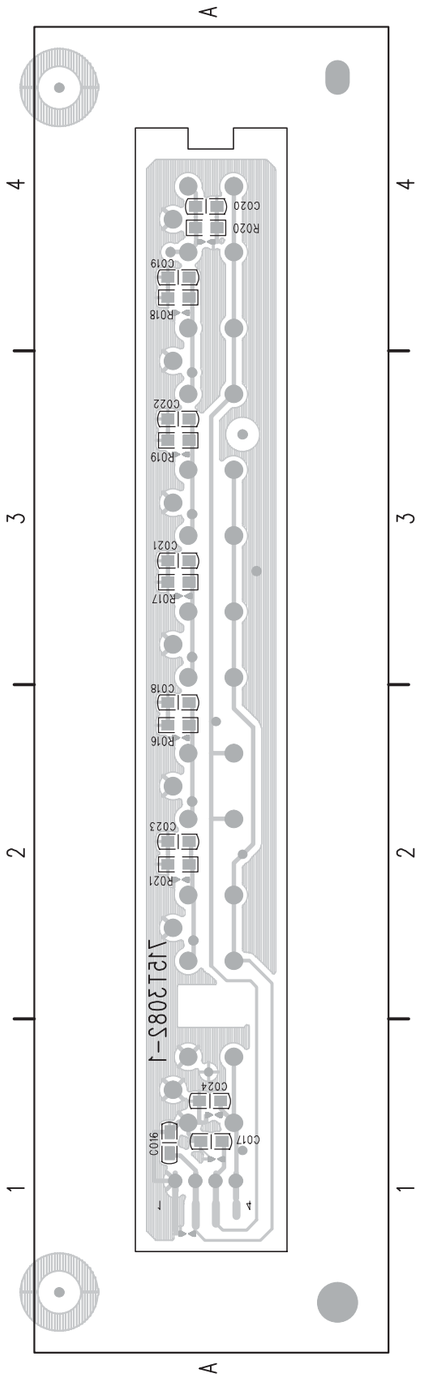
[3]KEY BOARD UNIT PRINTED WIRING BOARD

KEY BOARD Unit (Side-A)



CN016 A1
SW016 A2
SW017 A4
SW018 A4
SW019 A3
SW020 A3
SW021 A1
SW022 A2

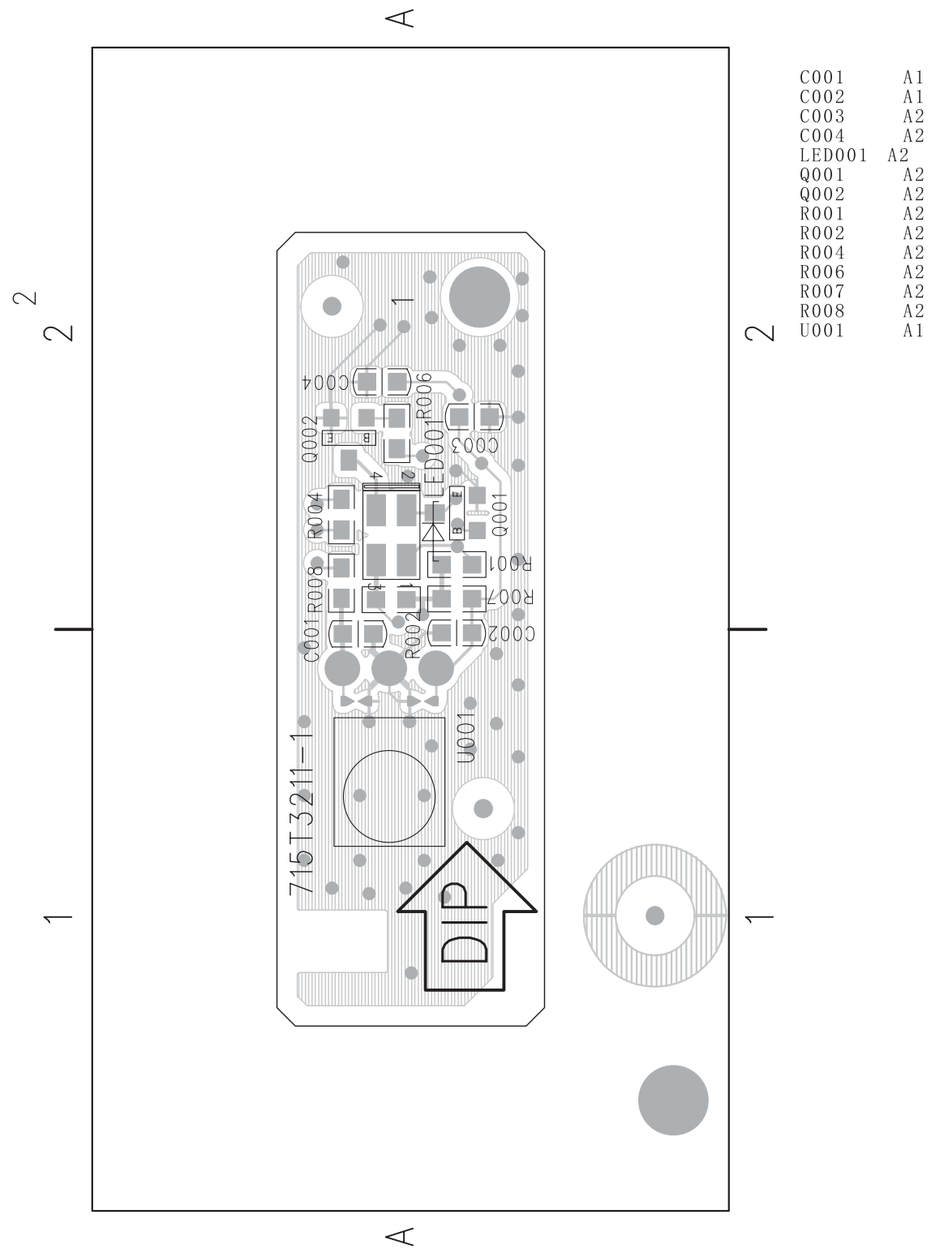
KEY BOARD Unit (Side-A)



C016 A1
C017 A1
C018 A2
C019 A4
C020 A4
C021 A3
C022 A3
C023 A2
C024 A1
R016 A2
R017 A3
R018 A4
R019 A3
R020 A4
R021 A2

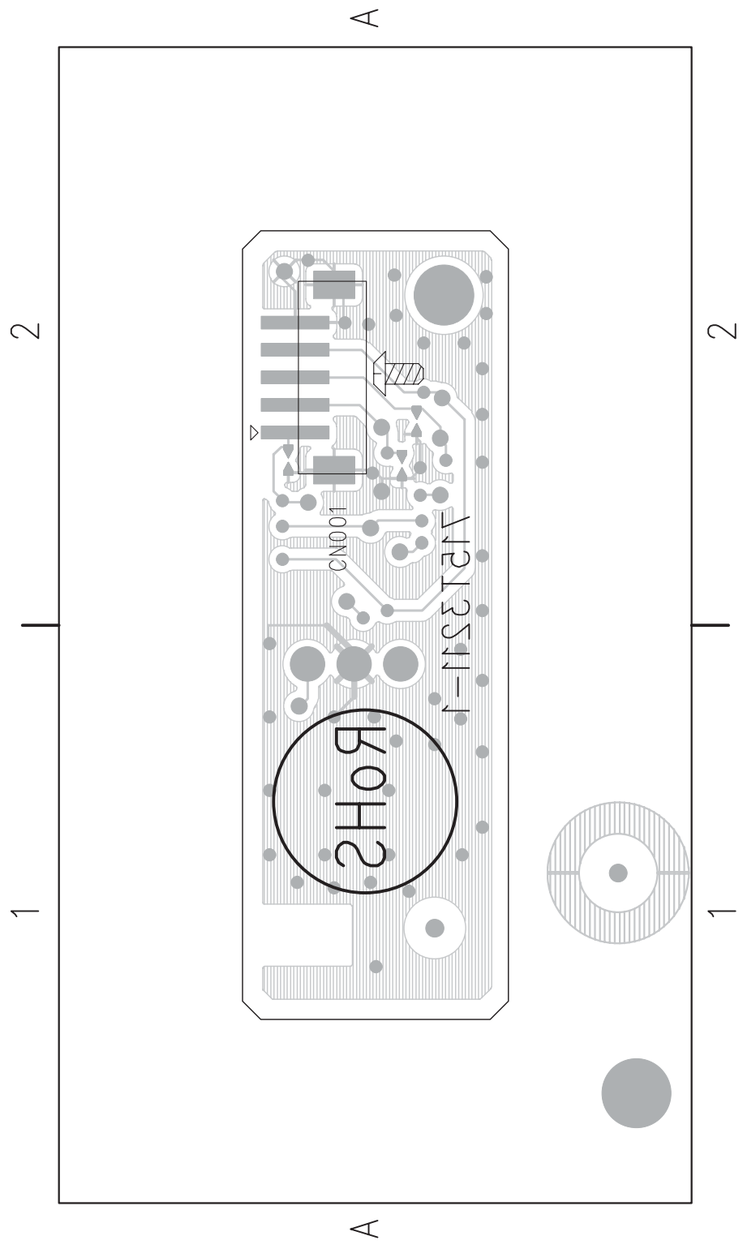
[3]IR UNIT PRINTED WIRING BOARD

IR Unit (Side-A)



C001	A1
C002	A1
C003	A2
C004	A2
LED001	A2
Q001	A2
Q002	A2
R001	A2
R002	A2
R004	A2
R006	A2
R007	A2
R008	A2
U001	A1

IR Unit (Side-A)



Cn001 A2

CHAPTER 8.SCHEMATIC DIAGRAM

[1]MAIN SCHEMATIC DIAGRAM

1.Power-1

DLA/DJA MT538X - 4 LAYERS

DC POWER INPUT

BRIGHT_ADJ:
Normal:Max:+3V3, Min:0V
Stand_By:0V

INVERTER_ON_OFF:
Normal: High
Stand_By: Low

STANDBY:
Normal: High
Stand_by: Low

CN100 TP100 TP101 TP102 TP103 TP104 TP105 TP106
INVERTER_ON_OFF
BRIGHT_ADJ
+12V
+24V
STB_PWR5V
R113 1K 1/16W 5% STANDBY
R108 NC/100R 1/16W 5% CEC_PWRSB
R142 NC/100R 1/16W 5% OPWRSB SMD/0402
63392 12P 2.0mm
For PFL32 <0. 3W

STB_PWR5V FB100 220R/2000mA FB101 220R/2000mA +5V_STB
C135 470uF 16V C136 100N 50V

+5V_STB(+5V4)

+24V +12V R134 NC/0R05 1/4W R133 NC/0R05 1/4W
U101 NC/TPS5420DR ENA GND VIN PH VSENSE NC NC BOOT
C100 NC/470uF 35V C106 NC/100N 50V
R112 NC/15K 1/10W 1% +5V_STB
R121 NC/4K7 1/10W R105 NC/0R05 1/10W R118 NC/0R05 1/10W 5%
C107 NC/10N 50V L100 NC/22uH
STAND_BY Q110 NC/MUN2211T1G
R110 NC/68R 1/8W R109 NC/68R 1/8W C115 NC/330P 50V
ZD102 NC/SS2P4 Use new comp
C122 NC/100N 50V C110 470uF 16V
Reserve

+24V or +12V TO +5V_STB(+5V4)_reserved for OTS42"

OPWRSB(+5V_SW ON/OFF):
Normal: High
Stand_By: Low

+5V_STB +5V_SW
Q104 SI5441DC
R119 22K 1/10W C105 100N 16V C101 100uF 16V C133 100N 16V
R130 5K1 1/10W
OPWRSB R107 10K 1/10W 5%
Q101 BC847C
R148 NC/1K 1/10W
CEC_PWRSB R145 NC/10K 1/16W 5% SMD/0402
C138 NC/10U 10V C137 22U 10V C121 NC/100N 16V
C114 NC/4.7UF 10V
Reserved

CEC_PWRSB:
Normal: High
Stand_by: Low

+5V_STB(+5V4) TO +5V_SW

2,13 +24V
2,13 +12V
2,7,8,9 +5V_STB
2,8,10,11,12,13,14 +5V_SW
2 +5V1_TUN
4,6 DV18_DDR
4 DV11
5 OPWRSB
5 STAND_BY
14 BRIGHT_ADJ
14 INVERTER_ON_OFF
2,4,5,7,14 DV33
2,9 +3V3SB
9 CEC_PWR
6 MEM_VREF
6 VTT
2,3,4,5,6,7,8,9,10,11,12,13,14 GND
5,7,9,12,13 DV33SB

DV33 DV33SB
R129 2K2 1/16W 5% SMD/0402
R144 NC/2K2 1/16W 5% SMD/0402
STANDBY
Q106 BC847C
R126 1K 1/16W 5% STAND_BY SMD/0402
C124 100N 16V SMD/0402

STAND_BY:(OPCTRL3)
Normal: Low
Stand_by: High

R146 NC/0R05 1/4W +12V
R147 0R05 1/4W +5V_SW
C113 220uF 25V

CEC_PWR(DV33SB ON/OFF):
Normal: Low
Stand_By: High

DV33SB for 538X MCU

+3V3SB R111 0R05 1/8W DV33SB
Q105 NC/SI3441BDV
C116 100N 25V C103 NC/100uF/16V C134 100N 16V R149 NC/2K2 1/16W 5%
R138 NC/22K 1/10W
R140 NC/3.3KOHM +-5% 1/10W
R141 NC/5K1 1/10W
CEC_PWRSB R150 0R05 1/10W 5%
CEC_PWR Q107 NC/MUN2211T1G
C140 10U 10V 0805 R139 NC/2K2 1/10W 5%
Q102 NC/MUN2211T1G C117 NC/10uF/10V

+3V3SB TO DV33SB BY CEC_PWR

0.6 x (1+2.4K/1.2K) = 1.8V
0.6 x (1+1K/1.2K) = 1.1V

DV18_DDR L101 15uH
C112 330UF 16V C131 NC/22N 16V
R137 NC/1K 1/10W 5% R124 200R 1/10W 1% R115 2K2 1/10W 1% R117 1K2 1/10W 1%
ZD101 SS2P4 R104 3K9 1/10W C102 33N 16V C129 330P 50V
U104 L5985 Vout SYNC INH COMP Vcc GND FSW FB
C108 10uF 16V R136 47K 1/10W R135 47K 1/10W C132 10uF 16V
U103 L5985 Vcc GND FSW FB Vout SYNC INH COMP
L102 15uH ZD100 SS2P4 R106 3K9 1/10W C128 330P 50V C104 33N 16V
R125 47R 1/10W 5% C130 NC/22N 16V R123 1K 1/10W 1% R116 NC/1K 1/10W 5% R122 1K2 1/10W 1%
DV11 C111 330UF 16V

OPWRSB R127 10K 1/10W 5% Q108 C125 100N 16V BC847C
Q109 BC847C R128 10K 1/10W 5% OPWRSB C109 100N 16V

OPWRSB(+1V8):
Normal: High
Stand_By: Low
OFF: Low

OPWRSB(+1V1):
Normal: High
Stand_By: Low
OFF: Low

From +12V to +1V8/+1V1 By OPWRSB

+5V_STB R143 0R05 1/4W +5V_TunerB+

+5V_TunerB+ R120 NC/0R05 1/4W +5V1_TUN
Q103 SI3441BDV
R102 5K1 1/10W
R104 22K 1/10W
STANDBY R101 4K7 1/10W 5% Q100 BC847C C127 4.7UF 10V
R100 22K 1/10W C126 100N 16V

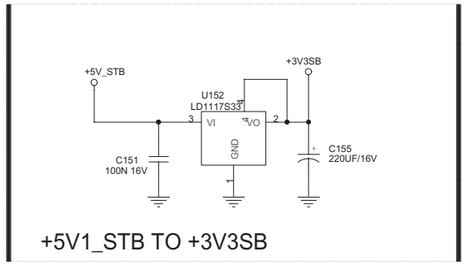
STANDBY:
Normal: High
Stand_by: Low

+5V_STB TO +5V1_TUN

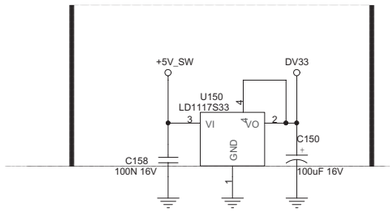
VTT DV18_DDR
C118 100N 16V
DV18_DDR R131 NC/75R 1/10W 1%
R114 4K7 1/10W
U102 GND SD VSENSE VREF VTT PVIN AVIN VDDQ LP2996MRX
MEM_VREF
R132 NC/75R 1/10W 1%
C119 100N 16V C120 NC/10UF 10V C123 100N 16V

DV18_DDR stabilizer

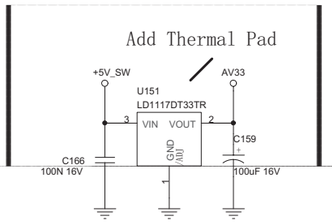
CN100 B1
C100 B4
C101 B9
C102 F2
C103 D9
C104 F5
C105 B8
C106 B4
C107 B5
C108 E3
C109 F4
C110 C6
C111 E6
C112 E1
C113 D4
C114 B8
C115 C5
C116 D8
C117 E9
C118 F9
C119 G9
C120 G9
C121 C8
C122 C6
C123 G10
C124 D2
C125 F3
C126 G8
C127 G8
C128 E5
C129 E2
C130 E6
C131 E1
C132 E4
C133 B9
C134 D9
C135 C2
C136 C2
C137 C8
C138 C7
C140 E8
FB100 C1
FB101 C1
L100 B5
L101 E2
L102 E5
Q100 G8
Q101 B8
Q102 E8
Q103 F7
Q104 B8
Q105 D9
Q106 D2
Q107 E7
Q108 F3
Q109 F4
Q110 C4
R100 G7
R101 G7
R102 G8
R103 G7
R104 E2
R105 B5
R106 E5
R107 B7
R108 B2
R109 C5
R110 C5
R111 D9
R112 B6
R113 B2
R114 F10
R115 E1
R116 E6
R117 F1
R118 B5
R119 B8
R120 F7
R121 B5
R122 F5
R123 E5
R124 E1
R125 E5
R126 D2
R127 F3
R128 F4
R129 D1
R130 B8
R131 F9
R132 G9
R133 B4
R134 B3
R135 E4
R136 E3
R137 E1
R138 D8
R139 E8
R140 D7
R141 E9
R142 B2
R143 F7
R144 D2
R145 C7
R146 D4
R147 D4
R148 C6
R149 D9
R150 E8
TP100 B1
TP101 B1
TP102 B1
TP103 B1
TP104 B1
TP105 B1
TP106 B1
U101 B4
U102 F10
U103 E4
U104 E3
ZD100 E5
ZD101 E2
ZD102 C5



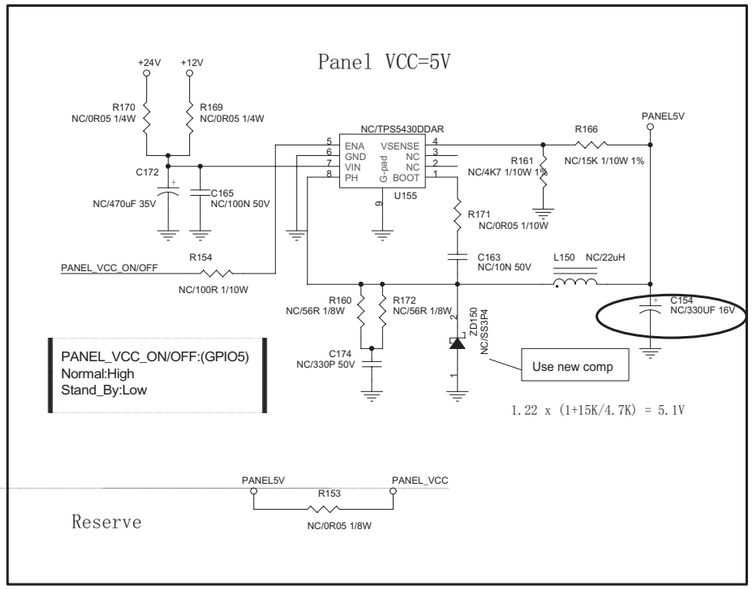
+5V1_STB TO +3V3SB

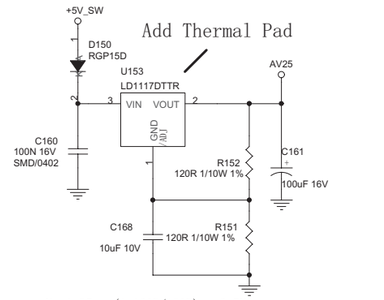


+5V_SW TO DV33

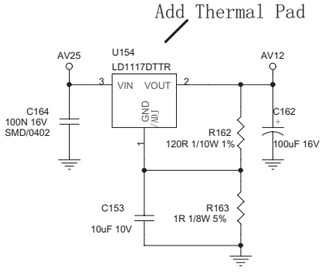


+5V_SW TO AV33

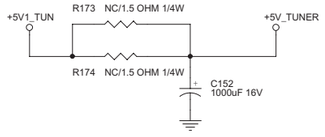




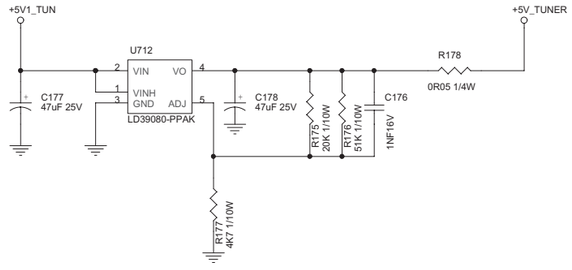
+5V_SW TO AV25



AV25 TO AV12



+5V_TUNER

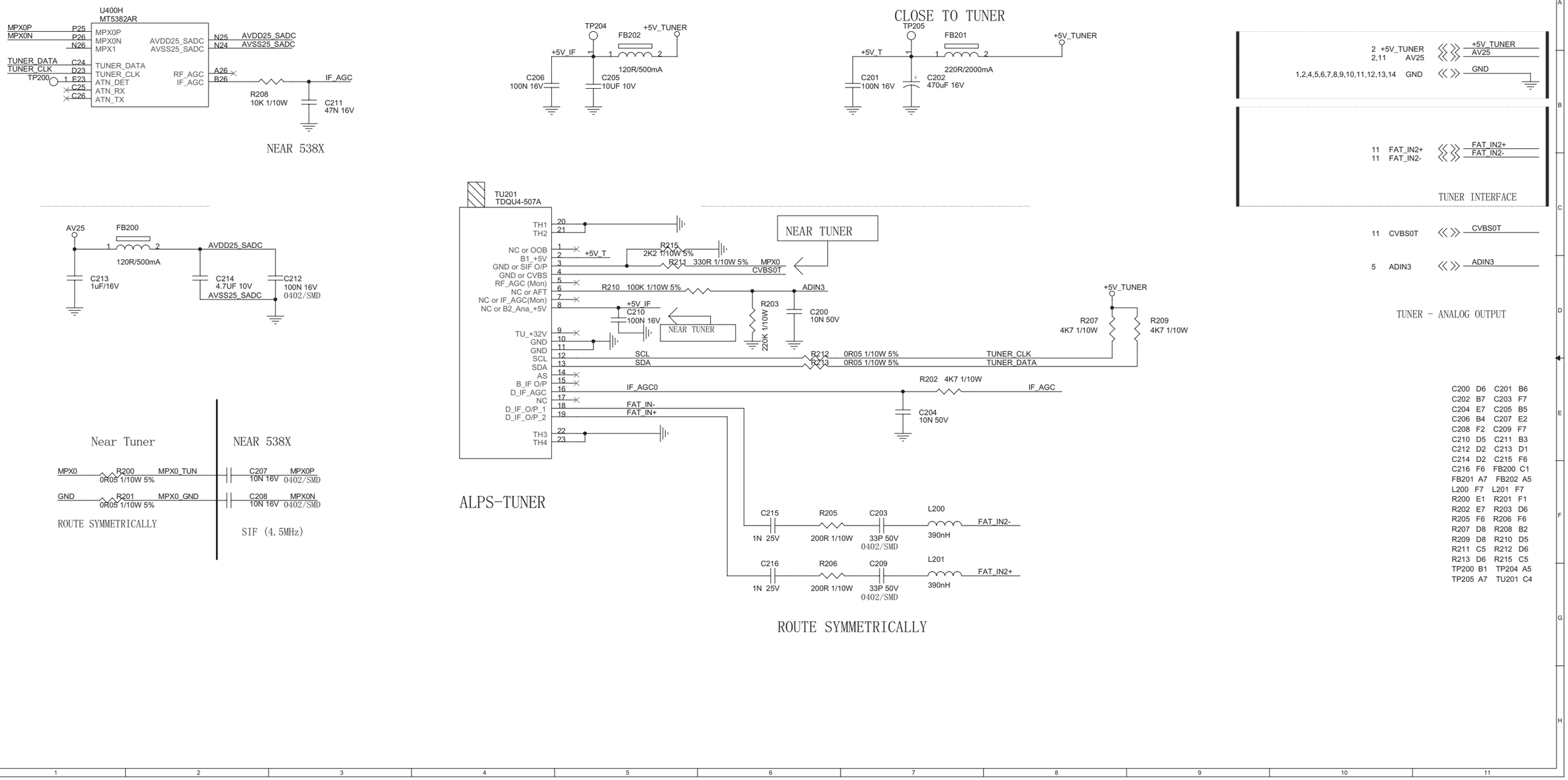


+5V_TUNER FROM Regulator

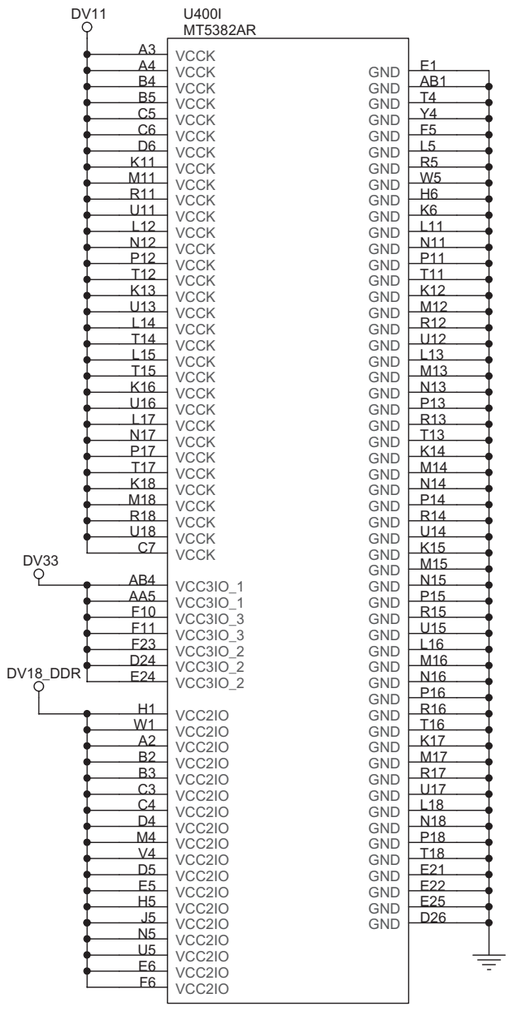
1,13 +24V
1,13 +12V
1,7,8,9 +5V_STB
1,9 +3V3SB
1,8,10,11,12,13,14 +5V_SW
3 +5V_TUNER
1 +5V1_TUN
1,4,5,7,14 DV33
8,12,13,14 AV33
1,5,7,9,12,13 DV33SB
8,10,12 AV12
14 PANEL_VCC
3,11 AV25
5 PANEL_VCC_ON/OFF
1,3,4,5,6,7,8,9,10,11,12,13,14 GND

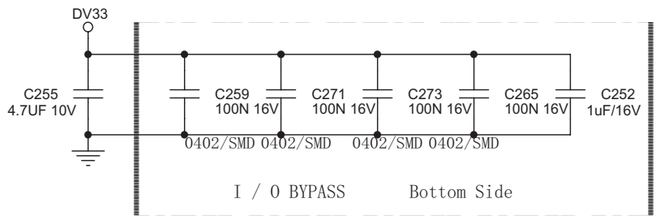
C139 E6
C150 C2
C151 B2
C152 G2
C153 E4
C154 B8
C155 B3
C156 E6
C157 E8
C158 C1
C159 C4
C160 E1
C161 E2
C162 E4
C163 B7
C164 E3
C165 B6
C166 C3
C167 E8
C168 E2
C169 E8
C172 B6
C174 C7
C176 G6
C177 G4
C178 G5
D150 D1
L150 B8
Q150 D7
Q151 E7
R151 E2
R152 E2
R153 C6
R154 B6
R155 D7
R157 E7
R158 E6
R159 E7
R160 B7
R161 B8
R162 E4
R163 E4
R164 E7
R166 A8
R169 A6
R170 A6
R171 B7
R172 B7
R173 F2
R174 G2
R175 G5
R176 G6
R177 G5
R178 G6
U150 C2
U151 C4
U152 A3
U153 D1
U154 D3
U155 A7
U712 G4
ZD150 B7

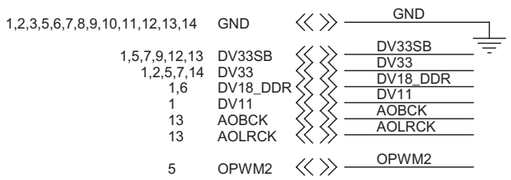
3.Tuner

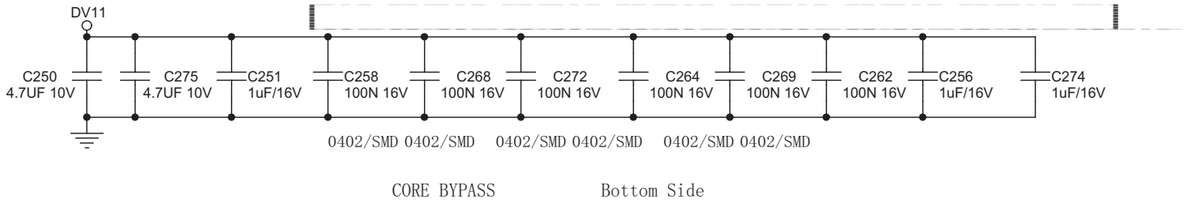

U400H
MT5382AR
MPX0P P25
MPX0N P26
N26
TUNER_DATA C24
TUNER_CLK D23
TP200 1 E23
C25
C26
MPX0P
MPX0N
MPX1
TUNER_DATA
TUNER_CLK
ATN_DET
ATN_RX
ATN_TX
AVDD25_SADC
AVSS25_SADC
RF_AGC
IF_AGC
N25 AVDD25_SADC
N24 AVSS25_SADC
A26
B26
IF_AGC
R208
10K 1/10W
C211
47N 16V
NEAR 538X
TP204
+5V_TUNER
FB202
+5V_IF
1
2
120R/500mA
C206
100N 16V
C205
10UF 10V
CLOSE TO TUNER
TP205
FB201
+5V_TUNER
+5V_T
220R/2000mA
C201
100N 16V
C202
470uF 16V
2 +5V_TUNER
2,11 AV25
+5V_TUNER
AV25
1,2,4,5,6,7,8,9,10,11,12,13,14 GND
GND
11 FAT_IN2+
11 FAT_IN2-
FAT_IN2+
FAT_IN2-
TUNER INTERFACE
AV25
FB200
AVDD25_SADC
C213
1uF/16V
C214
4.7UF 10V
AVSS25_SADC
C212
100N 16V
0402/SMD
TU201
TDQU4-507A
TH1 20
TH2 21
NC or OOB 1
B1_+5V 2
GND or SIF O/P 3
GND or CVBS 4
RF_AGC (Mon) 5
NC or AFT 6
NC or IF_AGC(Mon) 7
NC or B2_Ana_+5V 8
TU_+32V 9
GND 10
GND 11
SCL 12
SDA 13
AS 14
B_IF O/P 15
D_IF_AGC 16
NC 17
D_IF_O/P_1 18
D_IF_O/P_2 19
TH3 22
TH4 23
+5V_T
R215
2K2 1/10W 5%
R211 330R 1/10W 5%
MPX0
CVBS0T
R210 100K 1/10W 5%
ADIN3
+5V_IF
C210
100N 16V
NEAR TUNER
R203
220K 1/10W
C200
10N 50V
NEAR TUNER
+5V_TUNER
R207
4K7 1/10W
R209
4K7 1/10W
SCL
SDA
R212 0R05 1/10W 5%
R213 0R05 1/10W 5%
TUNER_CLK
TUNER_DATA
R202 4K7 1/10W
IF_AGC0
IF_AGC
C204
10N 50V
FAT_IN-
FAT_IN+
ALPS-TUNER
C215
1N 25V
R205
200R 1/10W
C203
33P 50V
0402/SMD
L200
390nH
FAT_IN2-
C216
1N 25V
R206
200R 1/10W
C209
33P 50V
0402/SMD
L201
390nH
FAT_IN2+
ROUTE SYMMETRICALLY
11 CVBS0T
CVBS0T
5 ADIN3
ADIN3
TUNER - ANALOG OUTPUT
C200 D6 C201 B6
C202 B7 C203 F7
C204 E7 C205 B5
C206 B4 C207 E2
C208 F2 C209 F7
C210 D5 C211 B3
C212 D2 C213 D1
C214 D2 C215 F6
C216 F6 FB200 C1
FB201 A7 FB202 A5
L200 F7 L201 F7
R200 E1 R201 F1
R202 E7 R203 D6
R205 F6 R206 F6
R207 D8 R208 B2
R209 D8 R210 D5
R211 C5 R212 D6
R213 D6 R215 C5
TP200 B1 TP204 A5
TP205 A7 TU201 C4
Near Tuner
NEAR 538X
MPX0
R200
0R05 1/10W 5%
MPX0_TUN
C207
10N 16V
MPX0P
0402/SMD
GND
R201
0R05 1/10W 5%
MPX0_GND
C208
10N 16V
MPX0N
0402/SMD
ROUTE SYMMETRICALLY
SIF (4.5MHz)

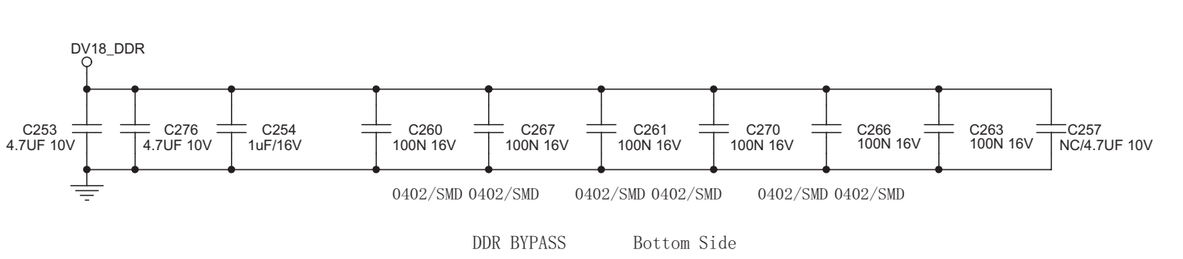
4.MT5382 BYPASS TRAP

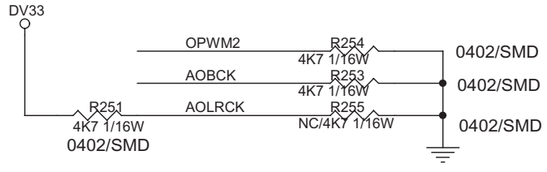








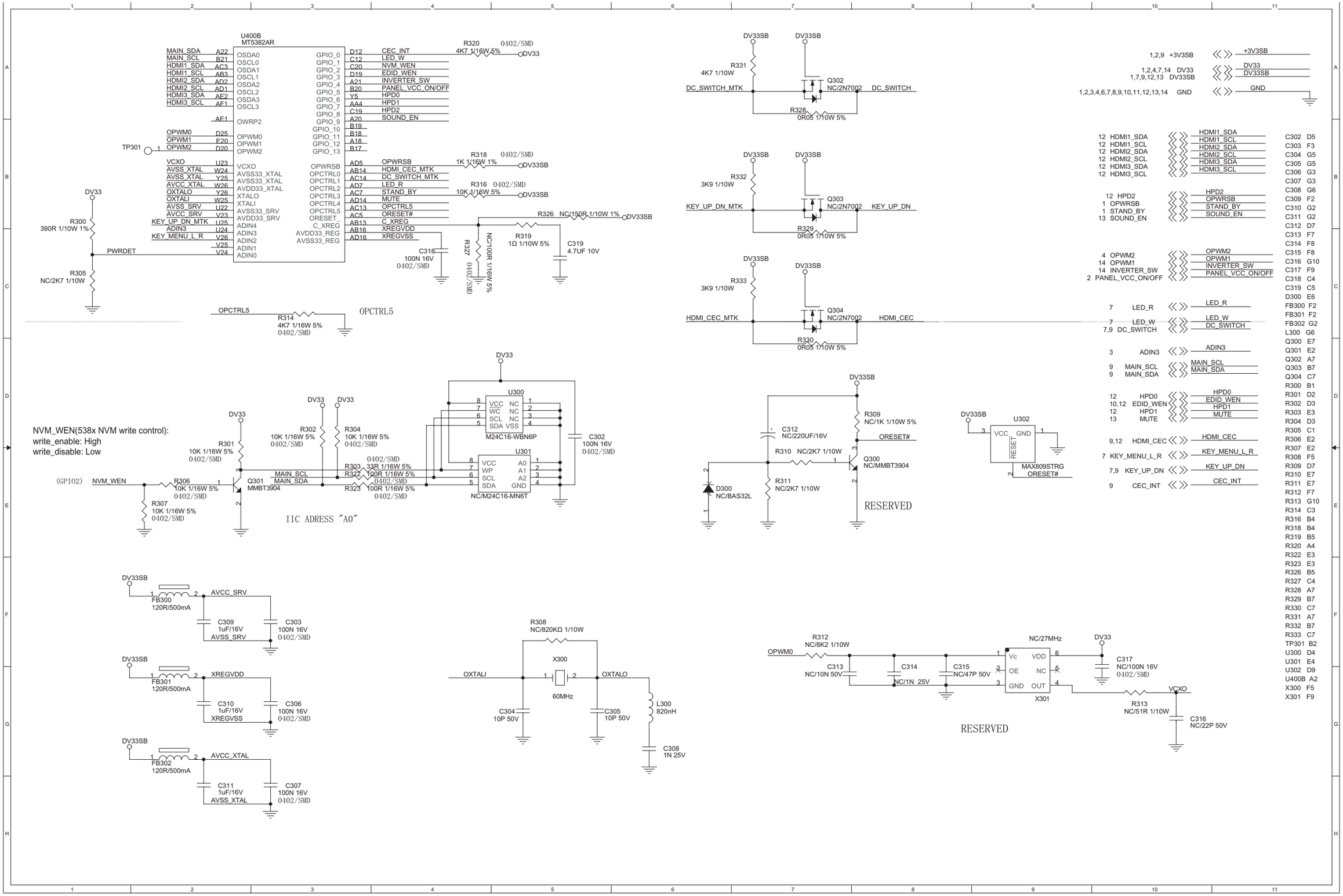




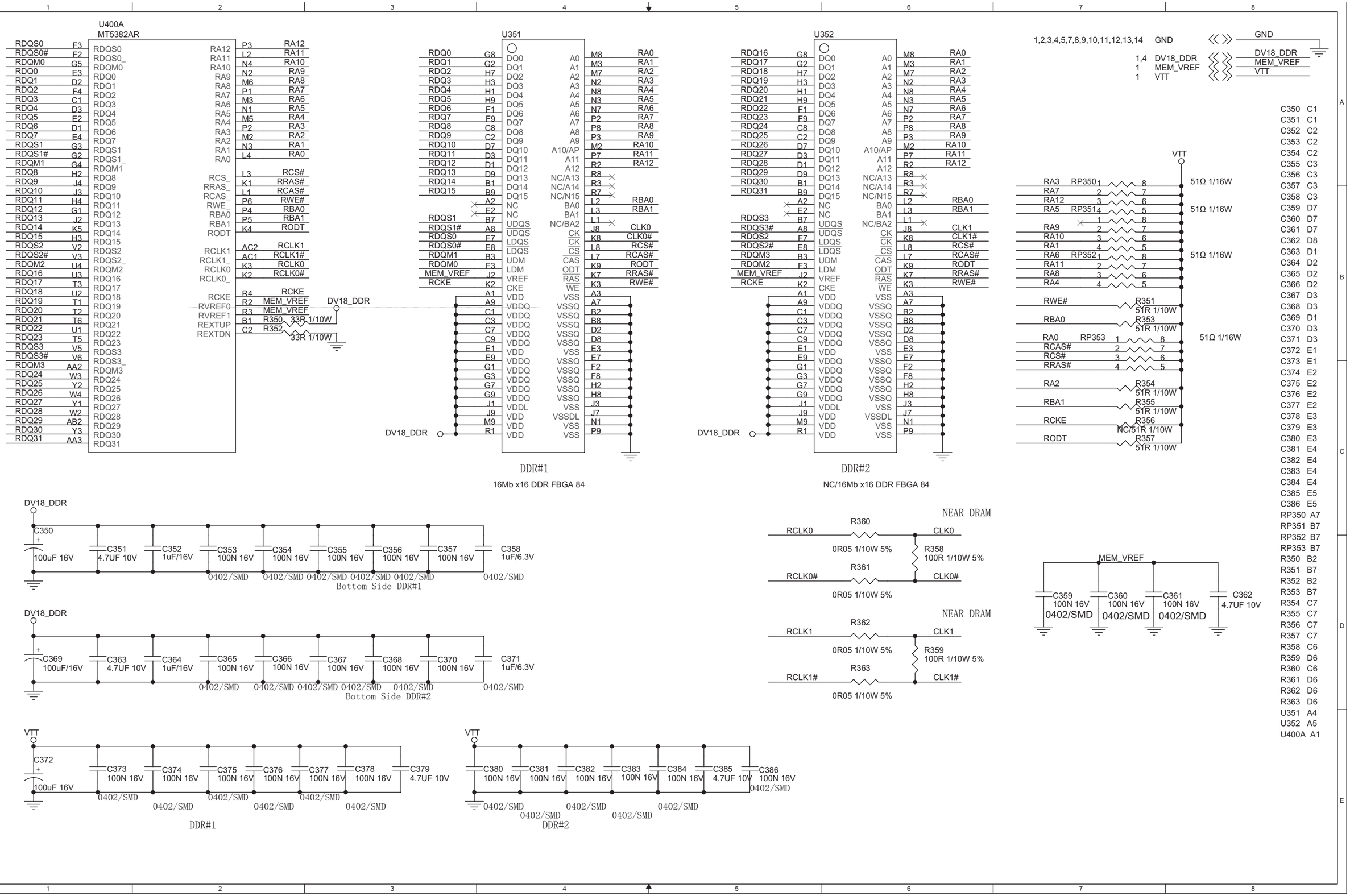
Trap Mode	AOLRCK
Normal mode	0
ICE mode	1

C250 B3
C251 B4
C252 A5
C253 C3
C254 C4
C255 A3
C256 B6
C257 C6
C258 B4
C259 A4
C260 C4
C261 C5
C262 B6
C263 C6
C264 B5
C265 A5
C266 C6
C267 C5
C268 B4
C269 B5
C270 C5
C271 A4
C272 B5
C273 A4
C274 B6
C275 B3
C276 C3
R251 D3
R253 D4
R254 D4
R255 D4
U400I A2

5. MT5382 PERIPHERAL

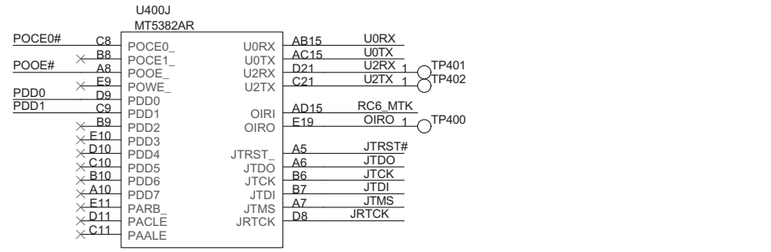


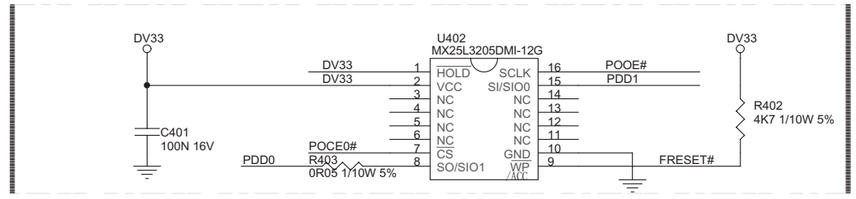
6.DDR2 MEMEORY

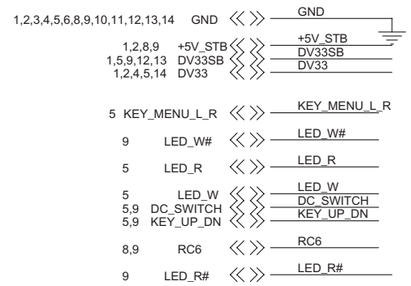


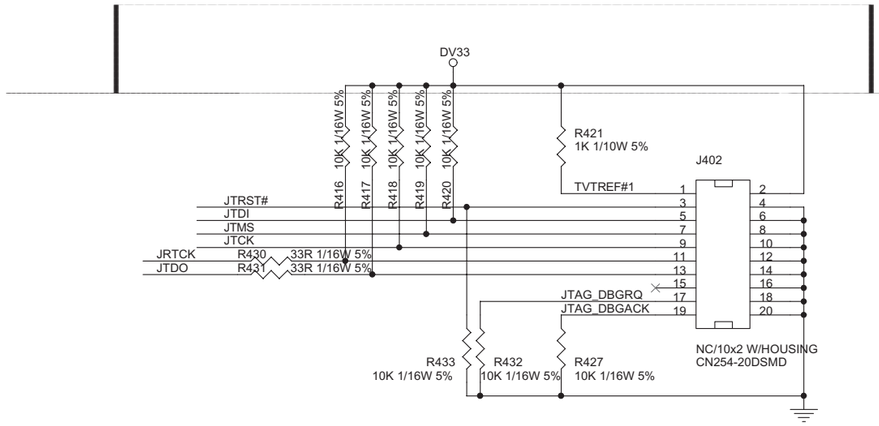
C350 C1
C351 C1
C352 C2
C353 C2
C354 C2
C355 C3
C356 C3
C357 C3
C358 C3
C359 D7
C360 D7
C361 D7
C362 D8
C363 D1
C364 D2
C365 D2
C366 D2
C367 D3
C368 D3
C369 D1
C370 D3
C371 D3
C372 E1
C373 E1
C374 E2
C375 E2
C376 E2
C377 E2
C378 E3
C379 E3
C380 E3
C381 E4
C382 E4
C383 E4
C384 E4
C385 E5
C386 E5
RP350 A7
RP351 B7
RP352 B7
RP353 B7
R350 B2
R351 B7
R352 B2
R353 B7
R354 C7
R355 C7
R356 C7
R357 C7
R358 C6
R359 D6
R360 C6
R361 D6
R362 D6
R363 D6
U351 A4
U352 A5
U400A A1

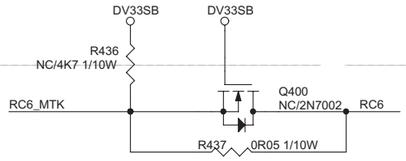
7.FLASH/JTAG/VART/IR

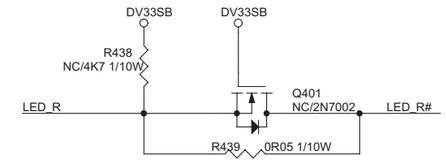


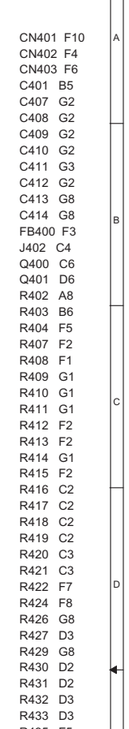






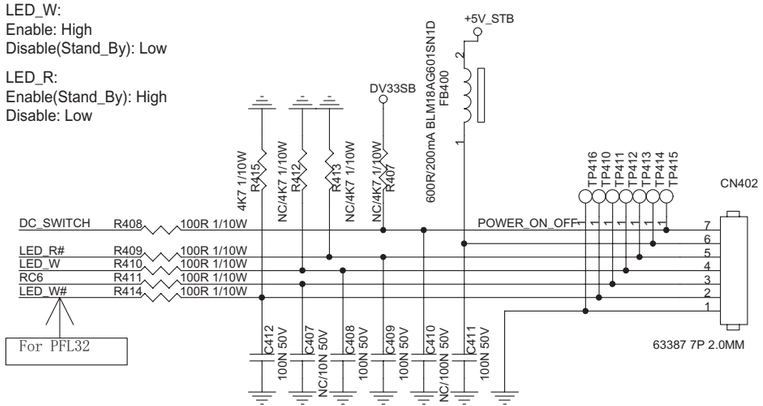




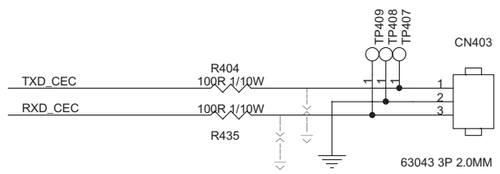


LED_W:
Enable: High
Disable(Stand_By): Low

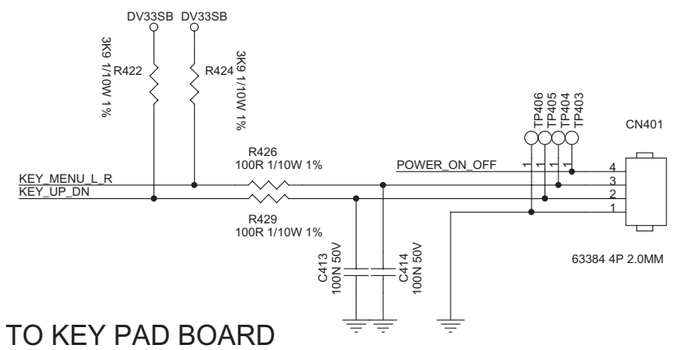
LED_R:
Enable(Stand_By): High
Disable: Low



TO IR BOARD

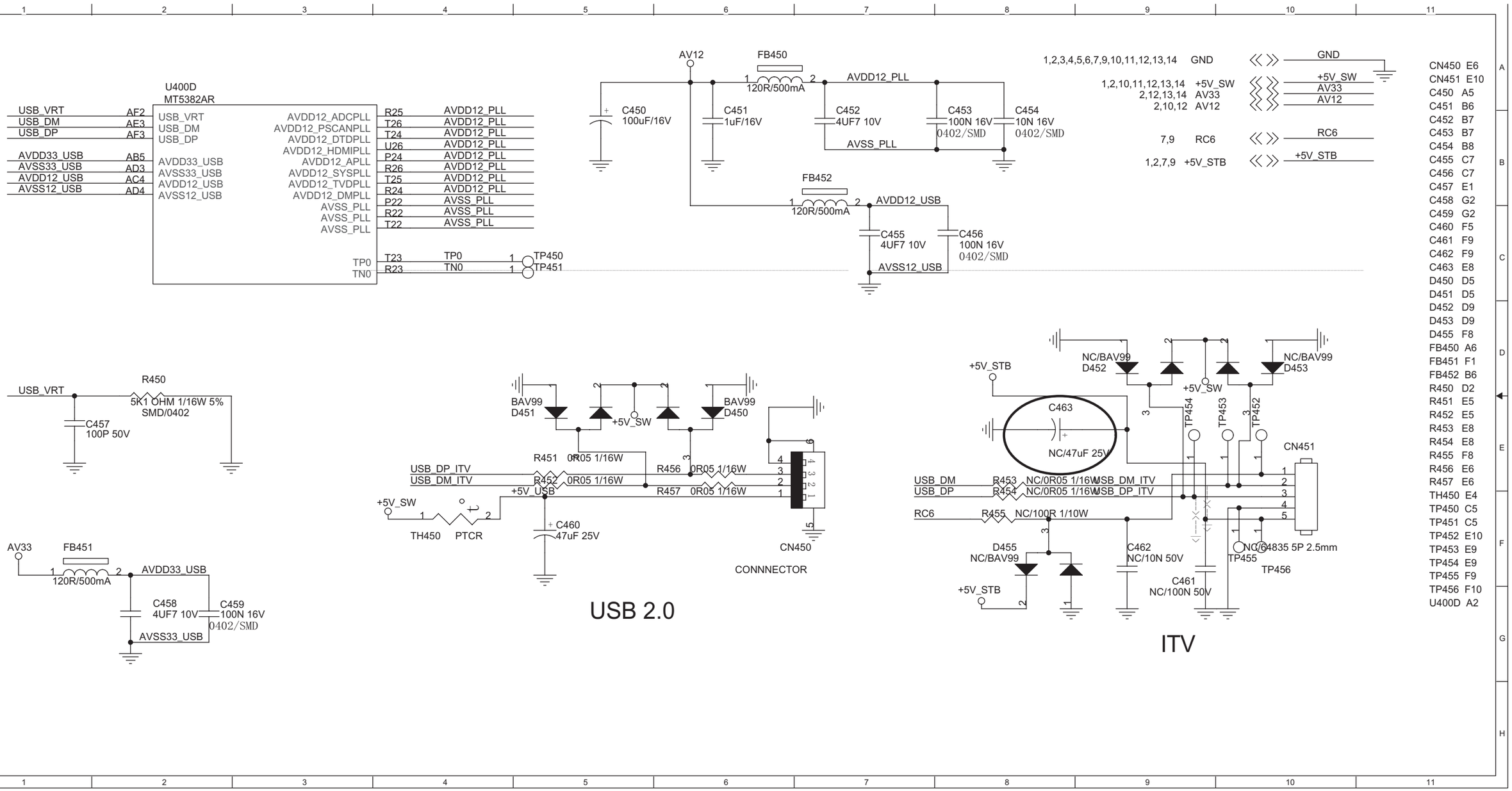


FOR CODE DOWNLOAD,DEBUGGING,
FACTORY ALIGUMENT AND
COMPAIR MODE

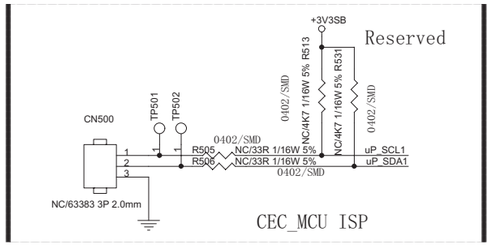


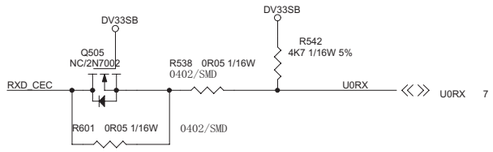
TO KEY PAD BOARD

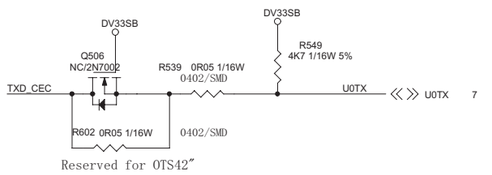
8.ANALOG PLL/USB 2.0/ITV



9.CEC MCU





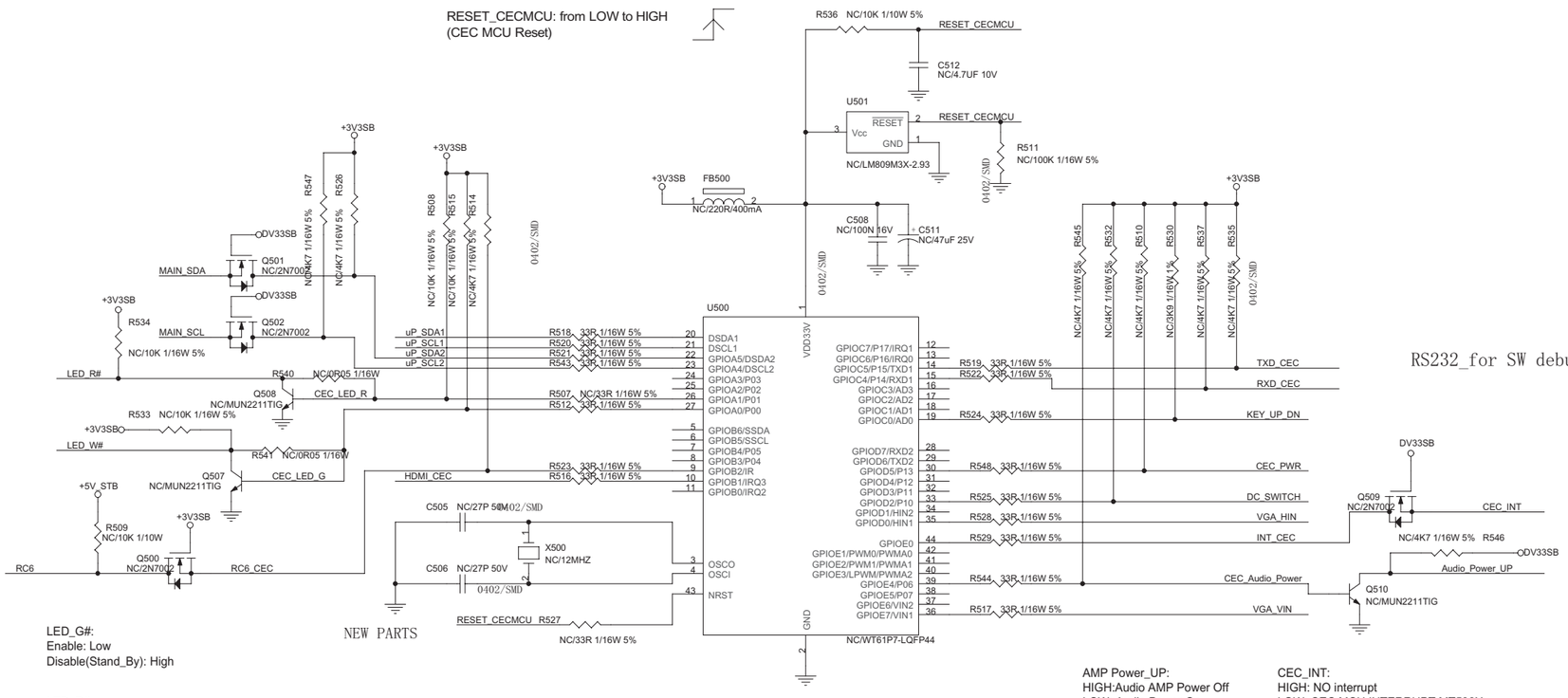


5,7 KEY_UP_DN — KEY_UP_DN
1,2,7,8 +5V_STB — +5V_STB
1,2 +3V3SB — +3V3SB
5,12 HDMI_CEC — HDMI_CEC
1 CEC_PWR — CEC_PWR
5 MAIN_SCL — MAIN_SCL
5 MAIN_SDA — MAIN_SDA
7 LED_W# — LED_W#
7,8 RC6 — RC6
7 LED_R# — LED_R#
5,7 DC_SWITCH — DC_SWITCH
5 CEC_INT — CEC_INT
1,2,3,4,5,6,7,8,10,11,12,13,14 GND
10 VGA_HIN — VGA_HIN
10 VGA_VIN — VGA_VIN
1,5,7,12,13 DV33SB — DV33SB
13 Audio_Power_UP — Audio_Power_UP
7 RXD_CEC — RXD_CEC
7 TXD_CEC — TXD_CEC

CN500 B2
C505 F4
C506 G4
C508 E6
C511 E6
C512 D6
FB500 E5
Q500 G2
Q501 E2
Q502 E2
Q505 A6
Q506 B6
Q507 F2
Q508 F3
Q509 F8
Q510 G8
R505 B3
R506 B3
R507 F4
R508 E3
R509 F2
R510 E7
R511 D6
R512 F4
R513 B3
R514 E4
R515 E4
R516 F4
R517 G6
R518 E4
R519 F6
R520 E4
R521 F4
R522 F6
R523 F4
R524 F6
R525 F6
R526 E3
R527 G4
R528 F6
R529 F6
R530 E7
R531 B3
R532 E7
R533 F2
R534 E2
R535 E8
R536 D6
R537 E7
R538 A6
R539 B6
R540 F3
R541 F3
R542 A7
R543 F4
R544 G6
R545 E7
R546 G9
R547 E3
R548 F6
R549 B7
R601 B6
R602 C6
TP501 B2
TP502 B2
U500 E5
U501 D6
X500 G4

RESET_CECMCU: from LOW to HIGH
(CEC MCU Reset)

Reserved



RS232_for SW debug

LED_G#:
Enable: Low
Disable(Stand_By): High

LED_R#:
Enable(Stand_By): High
Disable: Low

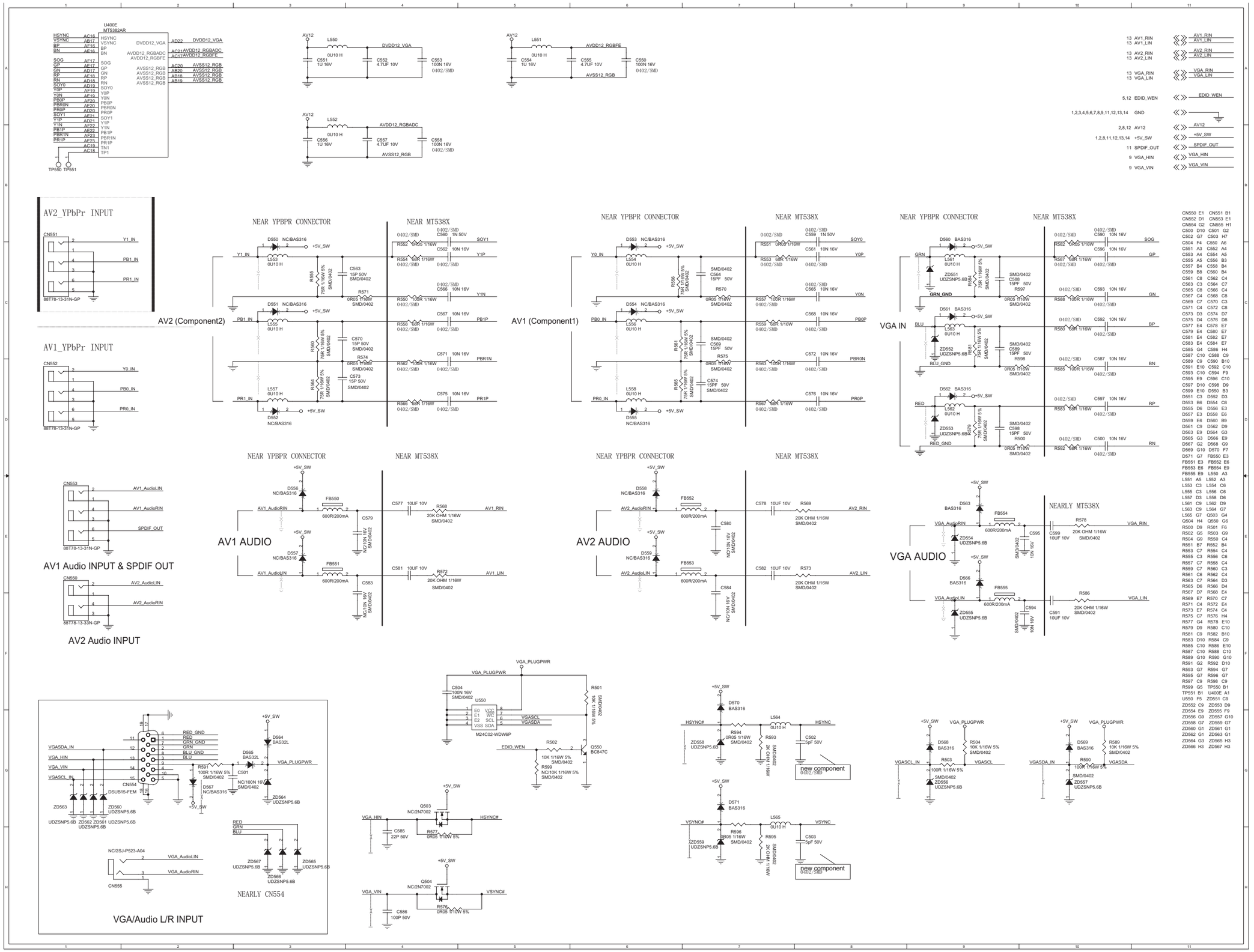
NEW PARTS

AMP Power_UP:
HIGH:Audio AMP Power Off
LOW: Audio Power On

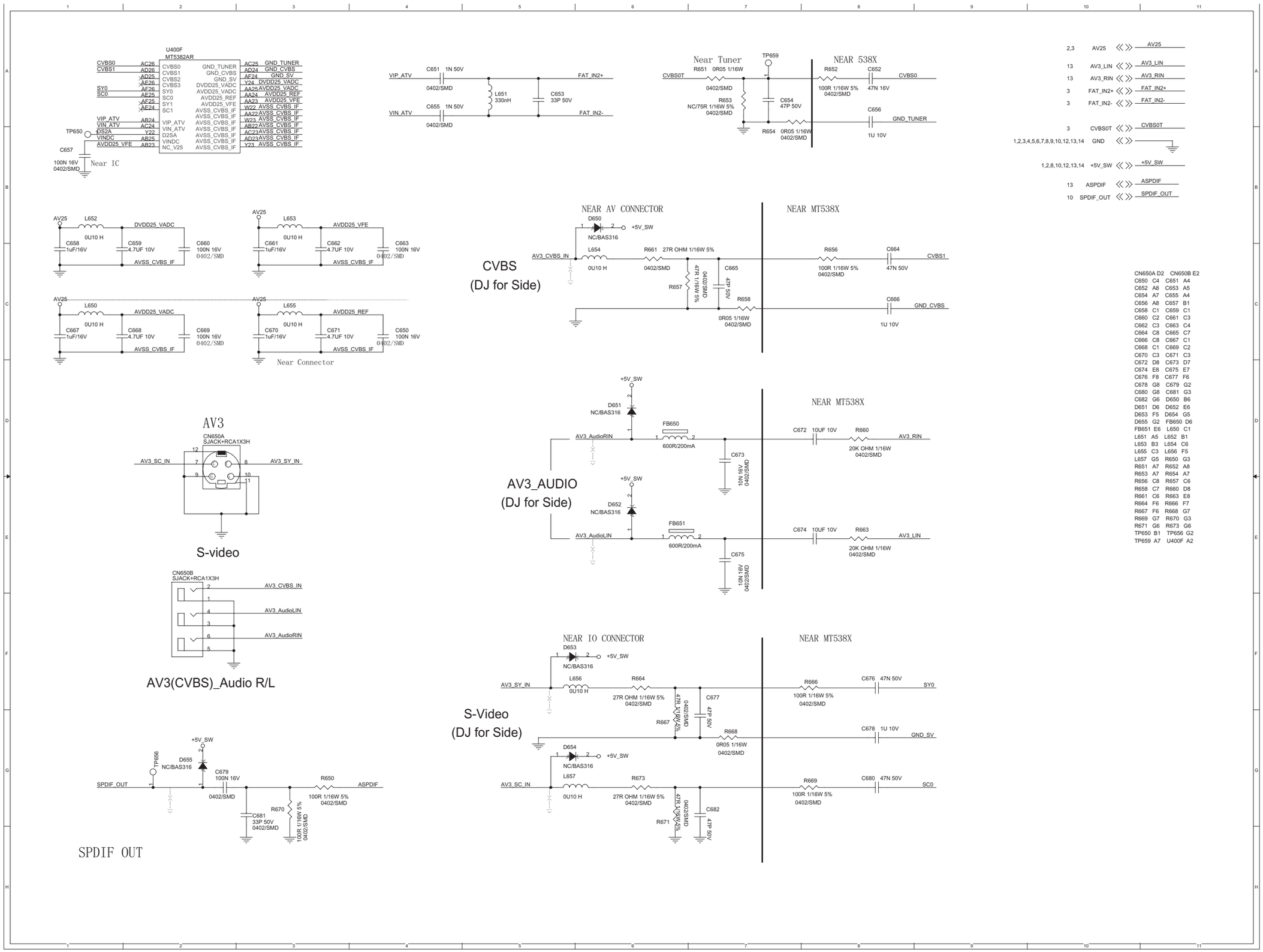
CEC_INT:
HIGH: NO interrupt
LOW: CEC MCU INTERRUPT MT538X

CEC_PWR:
Low: Turn on DV33SB(MT538X uP VCC)
High: Turn off DV33SB

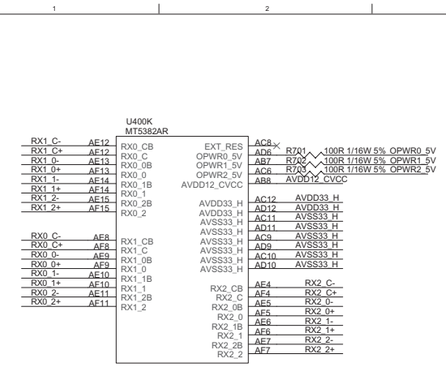
10. AV1/AV2/INPUT

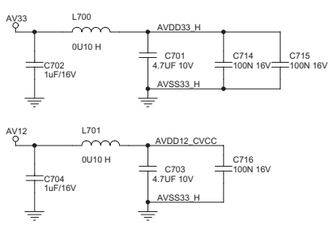


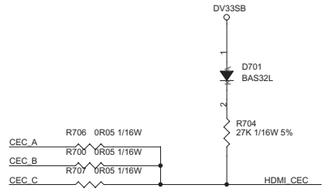
11. SIDE AV/SPDIF OUT

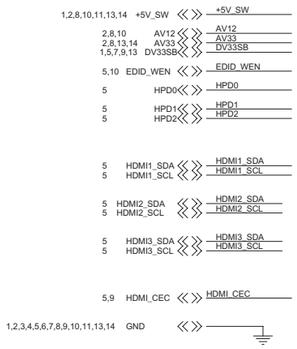


12.HDMI1/HDMI2/HDMI3 INPUT

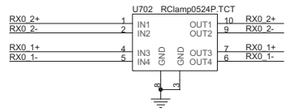


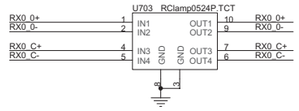


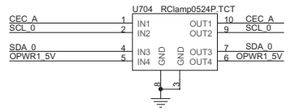


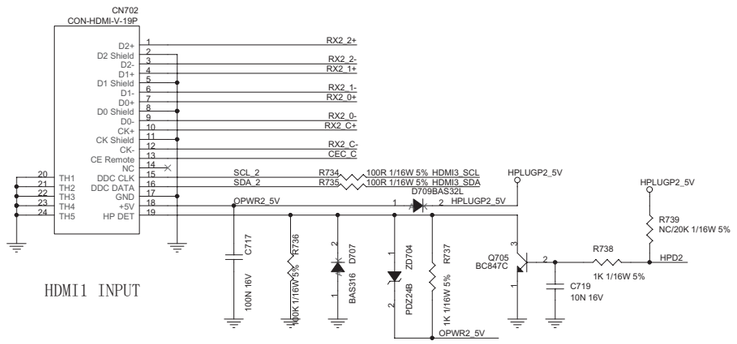


HDMI2 ESD PROT ECTER

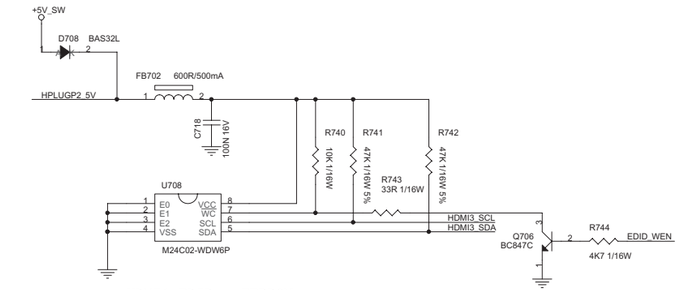




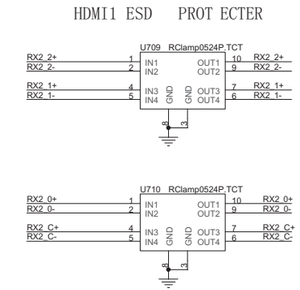




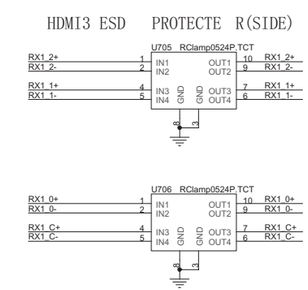
HDMI1 INPUT



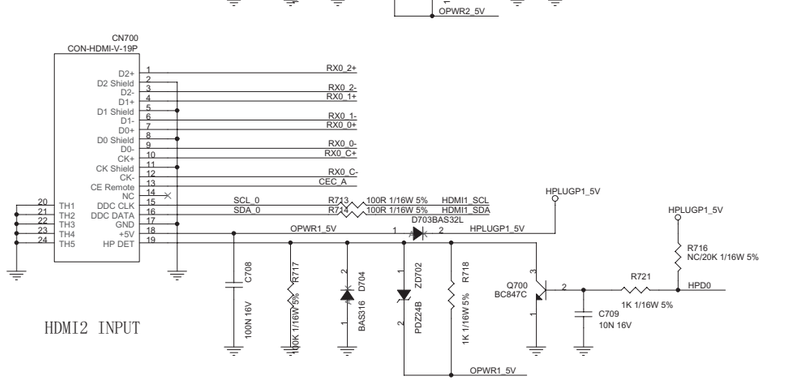
HDMI1 EDID EEPROM



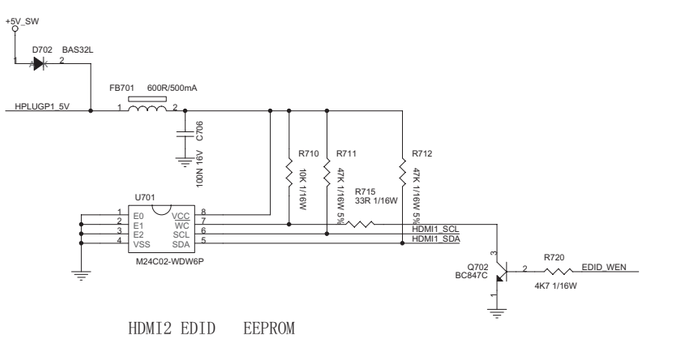
HDMI1 ESD PROT ECTER



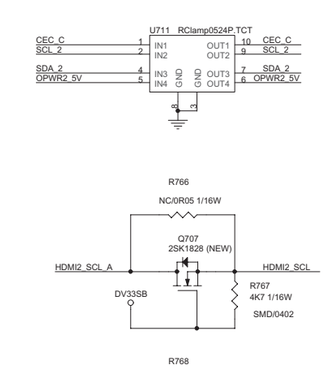
HDMI3 ESD PROTECTE R(SIDE)

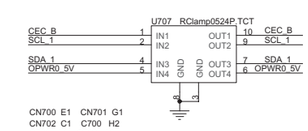


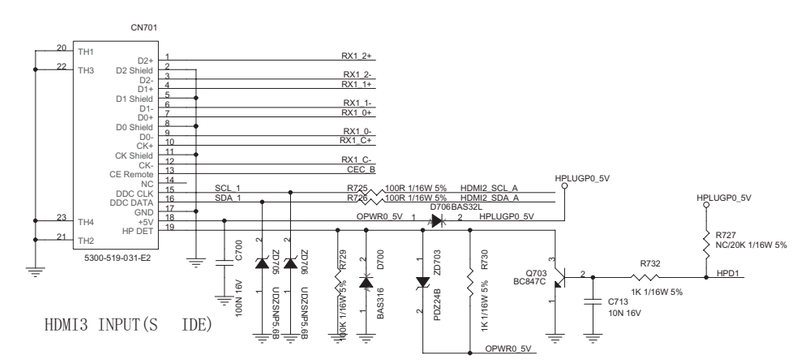
HDMI2 INPUT



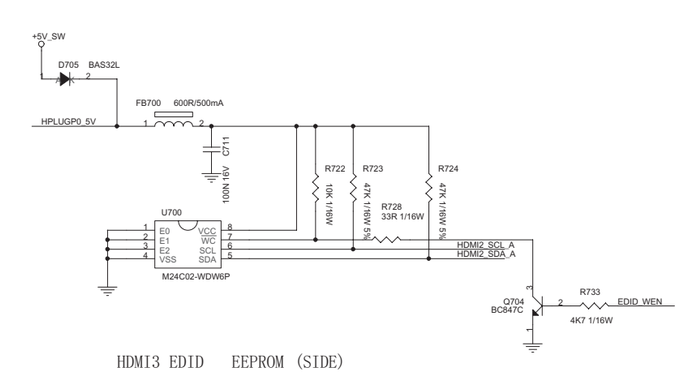
HDMI2 EDID EEPROM





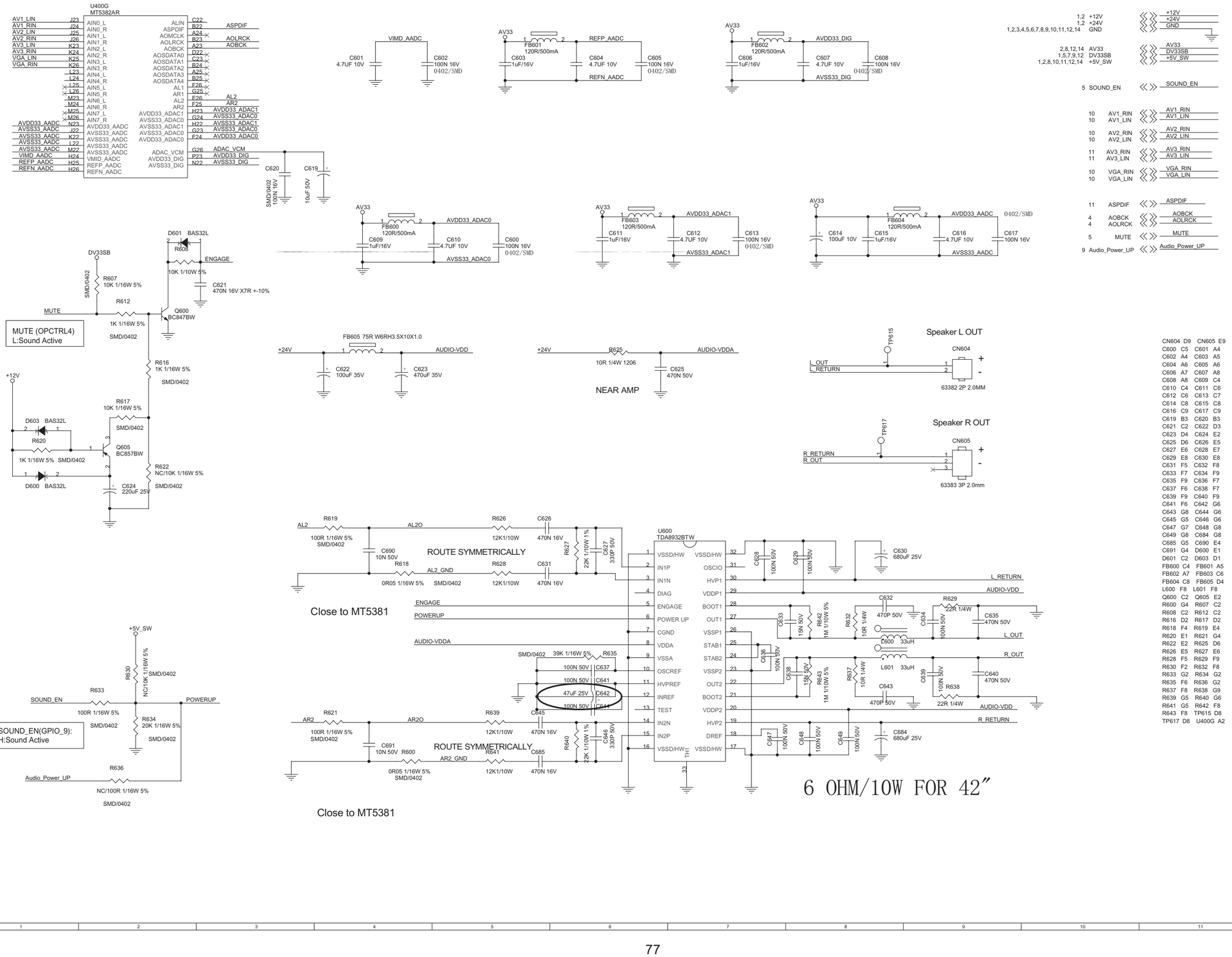


HDMI3 INPUT(S IDE)

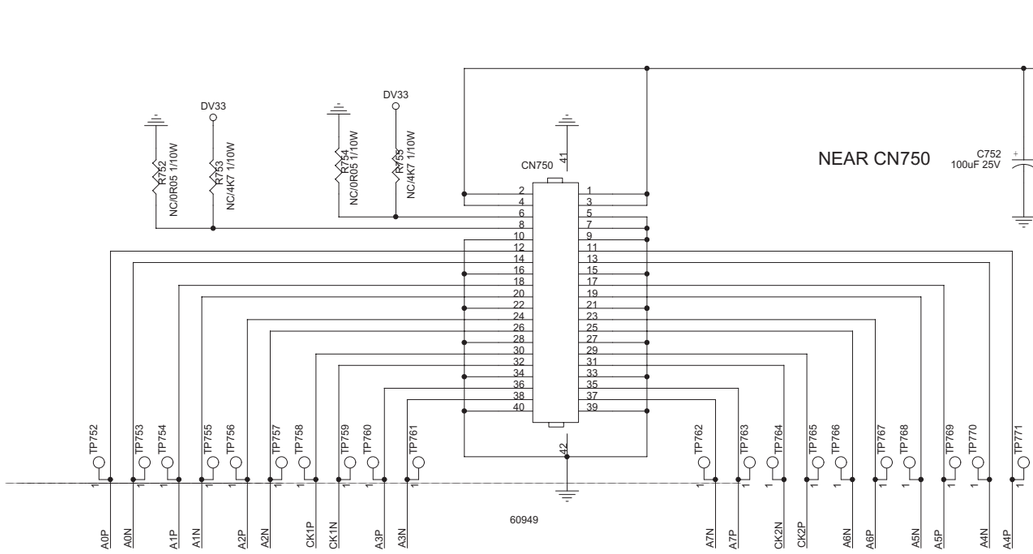


HDMI3 EDID EEPROM (SIDE)

13.AUDIO AMP

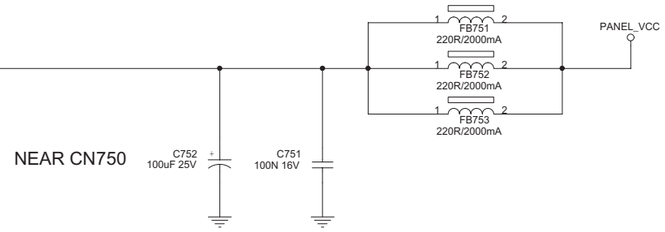

U400G
MT5382AR
AV1_LIN J23
AV1_RIN J24
AV2_LIN J25
AV2_RIN J26
AV3_LIN K23
AV3_RIN K24
VGA_LIN K25
K26
K26
L23
L24
L25
L26
M23
M24
M25
M26
AVDD33_AADC N23
AVSS33_AADC J22
AVSS33_AADC K22
AVSS33_AADC L22
AVSS33_AADC M22
VIMD_AADC H24
REFP_AADC H25
REFN_AADC H26
AIN0_L
AIN0_R
AIN1_L
AIN1_R
AIN2_L
AIN2_R
AIN3_L
AIN3_R
AIN4_L
AIN4_R
AIN5_L
AIN5_R
AIN6_L
AIN6_R
AIN7_L
AIN7_R
AVDD33_AADC
AVSS33_AADC
AVSS33_AADC
AVSS33_AADC
AVSS33_AADC
VMID_AADC
REFP_AADC
REFN_AADC
ALIN C22
ASPDIF B22 ASPDIF
AOMCLK A24
AOLRCK B23 AOLRCK
AOBCK A23 AOBCK
AOSDATA0 D22
AOSDATA1 C23
AOSDATA2 B24
AOSDATA3 A25
AOSDATA4 B25
AL1 F26
AR1 G25
AL2 F26 AL2
AR2 F25 AR2
AVDD33_ADAC1 H23 AVDD33_ADAC1
AVSS33_ADAC0 G24 AVSS33_ADAC0
AVSS33_ADAC1 H22 AVSS33_ADAC1
AVSS33_ADAC0 G23 AVSS33_ADAC0
AVDD33_ADAC0 F24 AVDD33_ADAC0
ADAC_VCM G26 ADAC_VCM
AVDD33_DIG P23 AVDD33_DIG
AVSS33_DIG N22 AVSS33_DIG
C620 SMD/0402 100N 16V
C619 10uF 50V
VIMD_AADC
C601 4.7UF 10V
C602 100N 16V 0402/SMD
AV33
FB601 120R/500mA
REFP_AADC
C603 1uF/16V
C604 4.7UF 10V
C605 100N 16V 0402/SMD
REFN_AADC
FB602 120R/500mA
AVDD33_DIG
C606 1uF/16V
C607 4.7UF 10V
C608 100N 16V 0402/SMD
AVSS33_DIG
1,2 +12V
1,2 +24V
1,2,3,4,5,6,7,8,9,10,11,12,14 GND
+12V
+24V
GND
2,8,12,14 AV33
1,5,7,9,12 DV33SB
1,2,8,10,11,12,14 +5V_SW
AV33
DV33SB
+5V_SW
5 SOUND_EN
SOUND_EN
10 AV1_RIN
10 AV1_LIN
AV1_RIN
AV1_LIN
10 AV2_RIN
10 AV2_LIN
AV2_RIN
AV2_LIN
11 AV3_RIN
11 AV3_LIN
AV3_RIN
AV3_LIN
10 VGA_RIN
10 VGA_LIN
VGA_RIN
VGA_LIN
11 ASPDIF
ASPDIF
4 AOBCK
4 AOLRCK
AOBCK
AOLRCK
5 MUTE
MUTE
9 Audio_Power_UP
Audio_Power_UP
FB600 120R/500mA
AVDD33_ADAC0
C609 1uF/16V
C610 4.7UF 10V
C600 100N 16V 0402/SMD
AVSS33_ADAC0
FB603 120R/500mA
AVDD33_ADAC1
C611 1uF/16V
C612 4.7UF 10V
C613 100N 16V 0402/SMD
AVSS33_ADAC1
FB604 120R/500mA
AVDD33_AADC 0402/SMD
C614 100uF 10V
C615 1uF/16V
C616 4.7UF 10V
C617 100N 16V
AVSS33_AADC
DV33SB
R607 10K 1/16W 5% SMD/0402
D601 BAS32L
R608 10K 1/10W 5%
ENGAGE
C621 470N 16V X7R +-10%
R612 1K 1/16W 5% SMD/0402
MUTE
Q600 BC847BW
MUTE (OPCTRL4)
L:Sound Active
R616 1K 1/16W 5% SMD/0402
+12V
R617 10K 1/16W 5% SMD/0402
D603 BAS32L
R620 1K 1/16W 5% SMD/0402
Q605 BC857BW
D600 BAS32L
C624 220uF 25V
R622 NC/10K 1/16W 5% SMD/0402
FB605 75R W6RH3.5X10X1.0
+24V
C622 100uF 35V
C623 470uF 35V
AUDIO-VDD
+24V
R625 10R 1/4W 1206
C625 470N 50V
AUDIO-VDDA
NEAR AMP
TP615
Speaker L OUT
L_OUT
L_RETURN
CN604
63382 2P 2.0MM
TP617
Speaker R OUT
R_RETURN
R_OUT
CN605
63383 3P 2.0mm
CN604 D9 CN605 E9
C600 C5 C601 A4
C602 A4 C603 A5
C604 A6 C605 A6
C606 A7 C607 A8
C608 A8 C609 C4
C610 C4 C611 C6
C612 C6 C613 C7
C614 C8 C615 C8
C616 C9 C617 C9
C619 B3 C620 B3
C621 C2 C622 D3
C623 D4 C624 E2
C625 D6 C626 E5
C627 E6 C628 E7
C629 E8 C630 E8
C631 F5 C632 F8
C633 F7 C634 F9
C635 F9 C636 F7
C637 F6 C638 F7
C639 F9 C640 F9
C641 F6 C642 G6
C643 G8 C644 G6
C645 G5 C646 G6
C647 G7 C648 G8
C649 G8 C684 G8
C685 G5 C690 E4
C691 G4 D600 E1
D601 C2 D603 D1
FB600 C4 FB601 A5
FB602 A7 FB603 C6
FB604 C8 FB605 D4
L600 F8 L601 F8
Q600 C2 Q605 E2
R600 G4 R607 C2
R608 C2 R612 C2
R616 D2 R617 D2
R618 F4 R619 E4
R620 E1 R621 G4
R622 E2 R625 D6
R626 E5 R627 E6
R628 F5 R629 F9
R630 F2 R632 F8
R633 G2 R634 G2
R635 F6 R636 G2
R637 F8 R638 G9
R639 G5 R640 G6
R641 G5 R642 F8
R643 F8 TP615 D8
TP617 D8 U400G A2
+5V_SW
R630 NC/10K 1/16W 5% SMD/0402
R633 SOUND_EN 100R 1/16W 5% SMD/0402
POWERUP
R634 20K 1/16W 5% SMD/0402
SOUND_EN(GPIO_9):
H:Sound Active
R636 Audio_Power_UP NC/100R 1/16W 5% SMD/0402
R619 AL2 100R 1/16W 5% SMD/0402
AL2O
R626 12K1/10W
C626 470N 16V
C690 10N 50V
ROUTE SYMMETRICALLY
R627 22K 1/10W 1%
C627 330P 50V
R618 0R05 1/16W 5% SMD/0402
AL2_GND
R628 12K1/10W
C631 470N 16V
Close to MT5381
U600
TDA8932BTW
VSSD/HW 1
IN1P 2
IN1N 3
DIAG 4
ENGAGE 5
POWER UP 6
CGND 7
VDDA 8
VSSA 9
OSCREF 10
HVPREF 11
INREF 12
TEST 13
IN2N 14
IN2P 15
VSSD/HW 16
VSSD/HW 32
OSCIO 31
HVP1 30
VDDP1 29
BOOT1 28
OUT1 27
VSSP1 26
STAB1 25
STAB2 24
VSSP2 23
OUT2 22
BOOT2 21
VDDP2 20
HVP2 19
DREF 18
VSSD/HW 17
TH+ 33
POWERUP
AUDIO-VDDA
SMD/0402 39K 1/16W 5% R635
100N 50V C637
100N 50V C641
47uF 25V C642
100N 50V C644
R621 AR2 100R 1/16W 5% SMD/0402
AR2O
R639 12K1/10W
C645 470N 16V
C691 10N 50V
ROUTE SYMMETRICALLY
R640 22K 1/10W 1%
C646 330P 50V
R600 0R05 1/16W 5% SMD/0402
AR2_GND
R641 12K1/10W
C685 470N 16V
Close to MT5381
C628 100N 50V
C629 100N 50V
C630 680uF 25V
L_RETURN
AUDIO-VDD
C632 470P 50V
R629 22R 1/4W
C633 15N 50V
R642 1M 1/10W 5%
R632 10R 1/4W
C634 100N 50V
C635 470N 50V
L_OUT
C600 33uH
C636 100N 50V
R_OUT
L601 33uH
C638 15N 50V
R643 1M 1/10W 5%
R637 10R 1/4W
C639 100N 50V
C640 470N 50V
C643 470P 50V
R638 22R 1/4W
AUDIO-VDD
R_RETURN
C647 100N 50V
C648 100N 50V
C649 100N 50V
C684 680uF 25V
6 OHM/10W FOR 42″

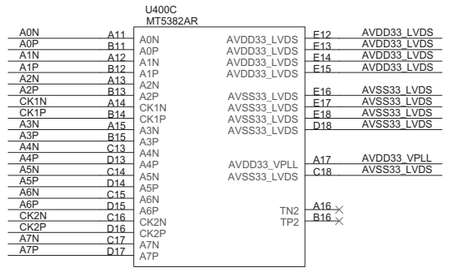
14.LVDS OUTPUT

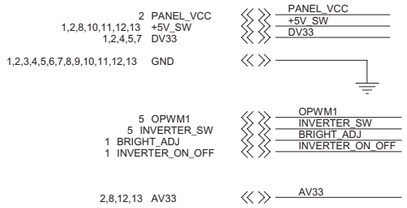


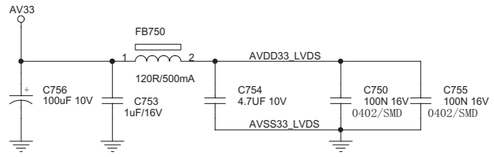
FOR LARGE PANEL

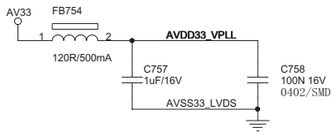
FOR FULL HD PANEL





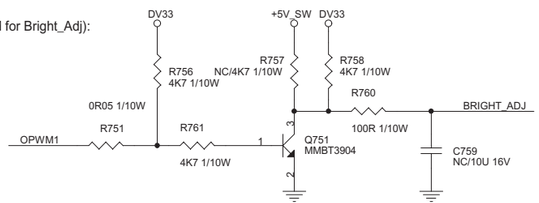






CN750 B3 C750 D8
C751 A6 C752 A6
C753 D7 C754 D8
C755 D9 C756 D7
C757 E8 C758 E8
C759 F3 C760 H4
FB750 D7 FB751 A7
FB752 A7 FB753 A7
FB754 E7 Q750 G3
Q751 F3 R751 F2
R752 A1 R753 A2
R754 A2 R755 A3
R756 E2 R757 E3
R758 E3 R759 G2
R760 E3 R761 F2
R763 G3 R764 G3
R765 G2 TP752 C1
TP753 C1 TP754 C1
TP755 C2 TP756 C2
TP757 C2 TP758 C2
TP759 C2 TP760 C2
TP761 C3 TP762 C4
TP763 C4 TP764 C4
TP765 C5 TP766 C5
TP767 C5 TP768 C5
TP769 C5 TP770 C5
TP771 C6 U400C B7

OPWM1(PWM for Bright_Adj):
Max: 0V
Min: +3V3

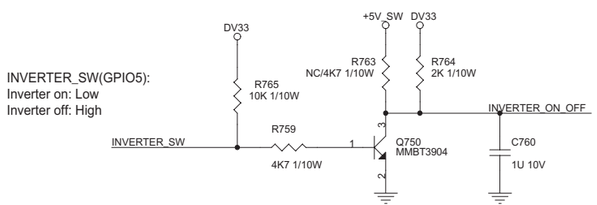


BRIGHT ADJUST

BL CONTROL	R760	R758	C759
PWM CONTROL	100R	4K7	N/C
DC CONTROL (Reserved)	5K6	1K	10U

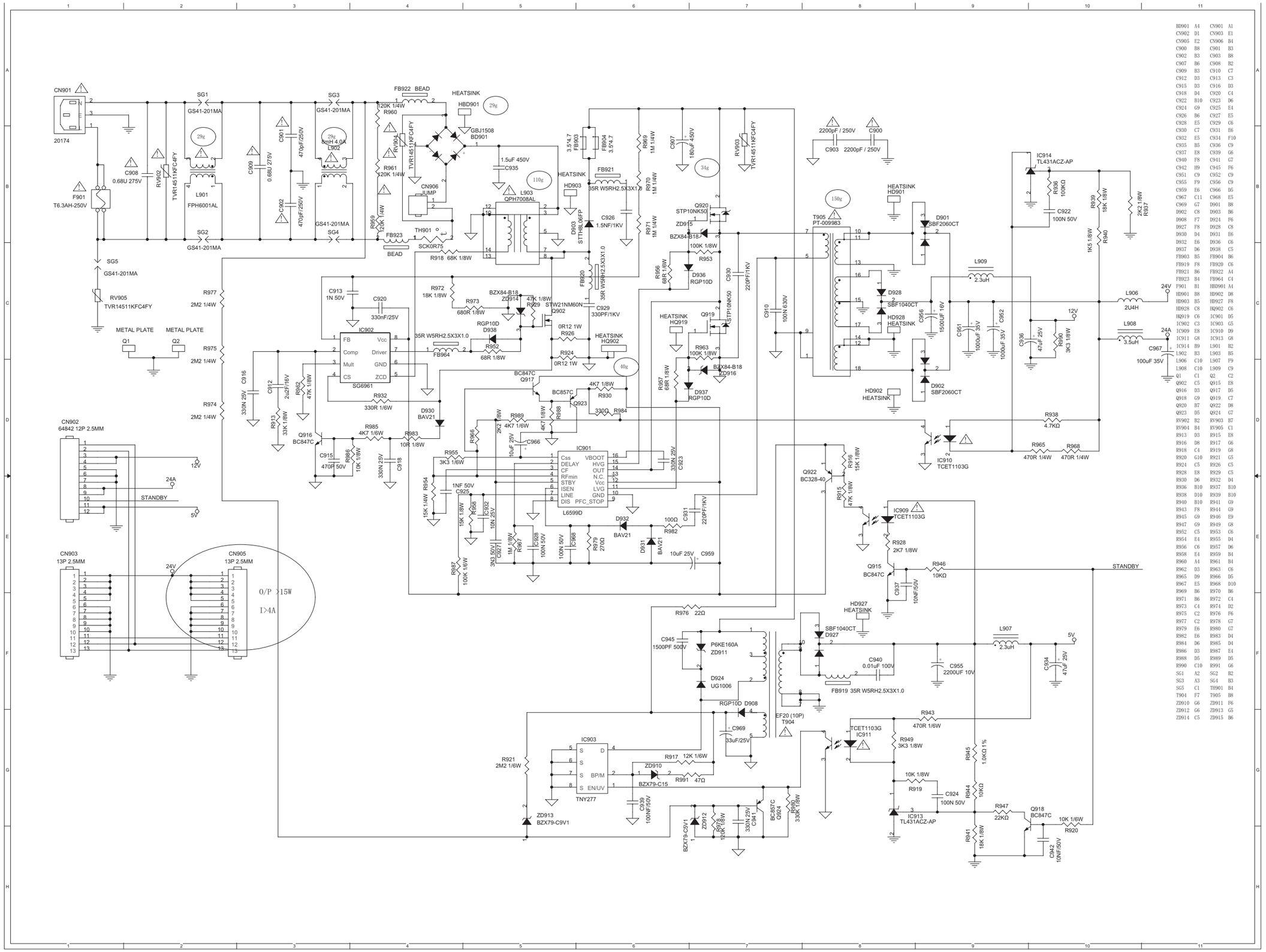
4K7:61G0603472
100R:61G0603101

INVERTER_SW(GPIO5):
Inverter on: Low
Inverter off: High



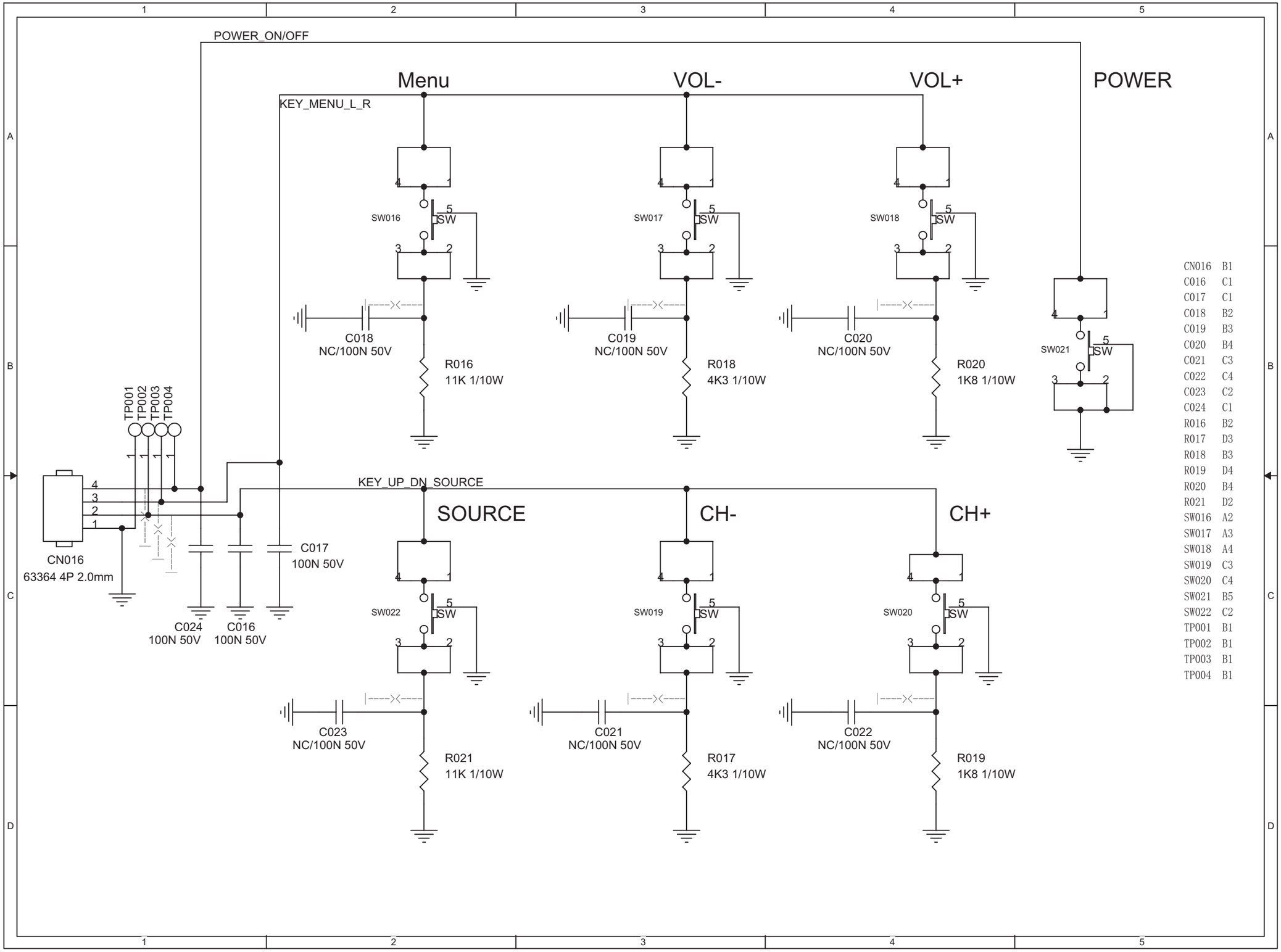
INVERTER ON/OFF

[2]POWER SCHEMATIC DIAGRAM



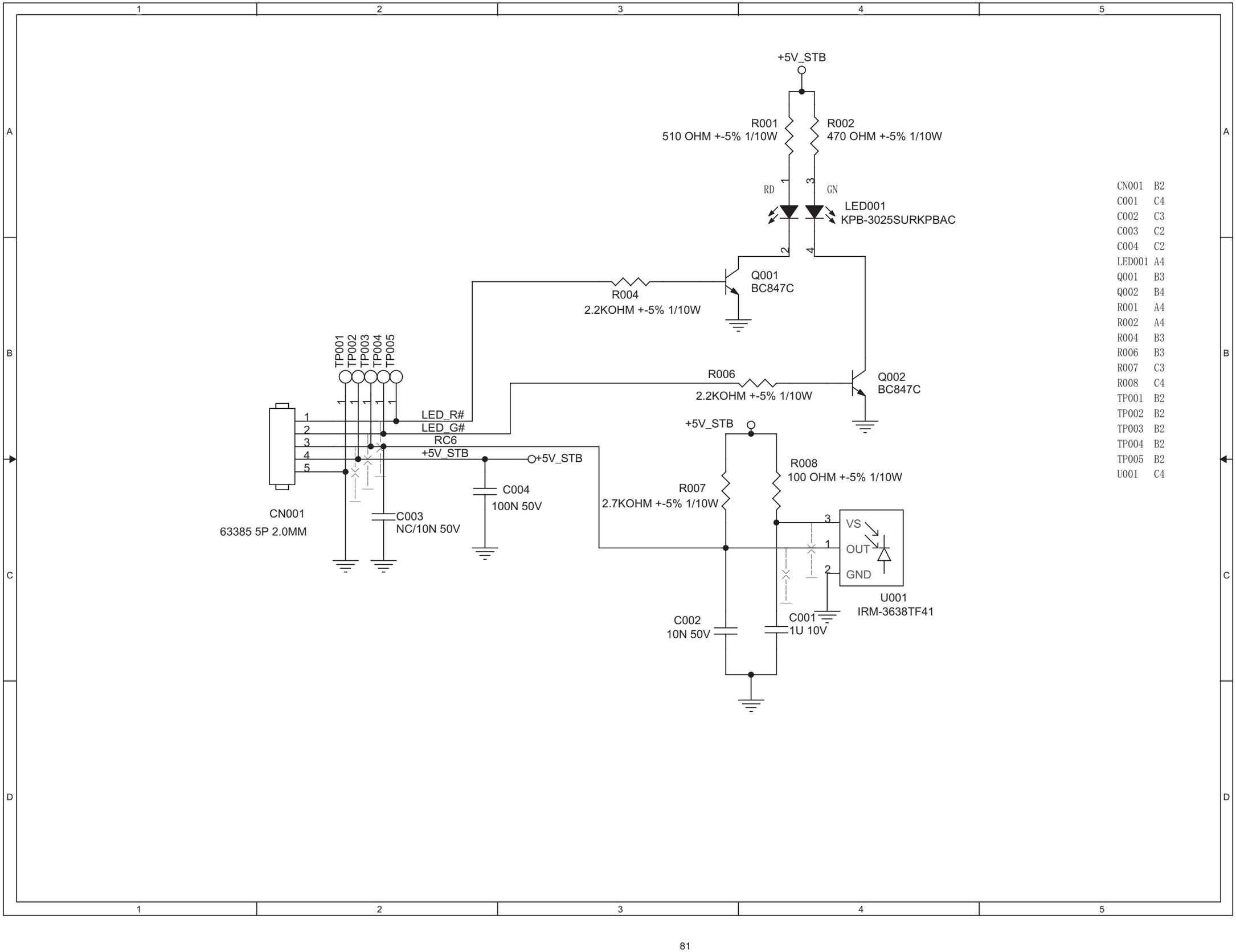
BD901	A4	CN901	A1
CN902	D1	CN903	E1
CN905	E2	CN906	B4
C900	B8	C901	B3
C902	B3	C903	B8
C907	B6	C908	B2
C909	B3	C910	C7
C912	D3	C913	C3
C915	B3	C916	D3
C918	D4	C920	C4
C922	B10	C923	D6
C924	G9	C925	E4
C926	B6	C927	E5
C928	E5	C929	C6
C930	C7	C931	E6
C932	E5	C934	F10
C935	B5	C936	C9
C937	E8	C939	G6
C940	F8	C941	G7
C942	B9	C945	F6
C951	C9	C952	C9
C955	F9	C956	C9
C959	E6	C966	D5
C967	C11	C968	E5
C969	G7	D901	B8
D902	C8	D903	B6
D908	F7	D924	F6
D927	F8	D928	C8
D930	D1	D931	E6
D932	E6	D936	C6
D937	D6	D938	C5
FB903	B5	FB904	B6
FB919	F8	FB920	C6
FB921	B6	FB922	A4
FB923	B4	FB964	C4
F901	B1	HBD901	A4
HD901	B8	HD902	D8
HD903	B5	HD927	F8
HD928	C8	HQ902	C6
HQ919	C6	IC901	D5
IC902	C3	IC903	G5
IC909	E8	IC910	D9
IC911	G8	IC913	G8
IC914	B9	L901	B2
L902	B3	L903	B5
L906	C10	L907	F9
L908	C10	L909	C9
Q1	C1	Q2	C2
Q902	C5	Q915	E8
Q916	D3	Q917	D5
Q918	G9	Q919	C7
Q920	B7	Q922	D8
Q923	B5	Q924	G7
RV902	B2	RV903	B7
RV904	B4	RV905	C1
R913	D3	R915	E8
R916	D8	R917	G6
R918	C4	R919	G8
R920	G10	R921	G5
R924	C5	R926	C5
R928	E8	R929	C5
R930	D6	R932	D4
R936	B10	R937	B10
R938	D10	R939	B10
R940	B10	R941	G9
R943	F8	R944	G9
R945	G9	R946	E9
R947	G9	R949	G8
R952	C5	R953	C6
R954	E4	R955	D4
R956	C6	R957	D6
R958	E4	R959	B4
R960	A4	R961	B4
R962	D3	R963	C6
R965	D9	R966	D5
R967	E5	R968	D10
R969	B6	R970	B6
R971	B6	R972	C4
R973	C4	R974	D2
R975	C2	R976	F6
R977	C2	R978	G7
R979	E6	R980	G7
R982	E6	R983	D4
R984	D6	R985	D4
R986	D3	R987	E4
R988	D5	R989	D5
R990	C10	R991	G6
SG1	A2	SG2	B2
SG3	A3	SG4	B3
SG5	C1	TH901	B4
T904	F7	T905	B8
ZD910	G6	ZD911	F6
ZD912	G6	ZD913	G5
ZD914	C5	ZD915	B6

[3]KEY SCHEMATIC DIAGRAM



CN016	B1
C016	C1
C017	C1
C018	B2
C019	B3
C020	B4
C021	C3
C022	C4
C023	C2
C024	C1
R016	B2
R017	D3
R018	B3
R019	D4
R020	B4
R021	D2
SW016	A2
SW017	A3
SW018	A4
SW019	C3
SW020	C4
SW021	B5
SW022	C2
TP001	B1
TP002	B1
TP003	B1
TP004	B1

[1]IR SCHEMATIC DIAGRAM



CN001	B2
C001	C4
C002	C3
C003	C2
C004	C2
LED001	A4
Q001	B3
Q002	B4
R001	A4
R002	A4
R004	B3
R006	B3
R007	C3
R008	C4
TP001	B2
TP002	B2
TP003	B2
TP004	B2
TP005	B2
U001	C4

CHAPTER 9. PARTS GUIDE

[1] SPARE PARTS LIST

MODEL:LC-42SB45U					
LOCATION	**PARTS CODE**	**PRICE RANK**	**NEW MARK**	**PART DELIVERY**	**DESCRIPTION**
Mechanical Parts					
30	9JR7050000002	10.93		FOB	BEZEL ASSY
40	9JR7050000003	13.32		FOB	REAR COVER ASSY
50	9JR7050000004	8.71		FOB	BASE ASSY
60	9JR7050000005	5.65		FOB	BASE STAND ASSY
70	9JR7050000001	0.47		FOB	KEY PAD ASSY
91	9JR3400000005	0.75		FOB	NECK
92	9JR1500000005	0.6		FOB	PANEL BKT
93	9JR1500000009	2.14		FOB	BRACKET_STAND
94	9JR1500000008	0.7		FOB	BRACKET_PCB
96	9JR1500000006	0.64		FOB	VESA Bracket
97	9JR1500000011	0.07		FOB	BRACKET_METAL
98	9JR1500000007	0.07		FOB	FIX BKT FOR AUO SIDE
99	9JR1500000010	0.16		FOB	BRACKET_SIDE
ACCESSORY PARTS					
1172	9JR8900000001	1.79		FOB	POWER CORD 1.8M 4L5J-052-00K
1176	9JR9800000001	2.34		FOB	REMOTE CONTROL GA695WJSA
	9JR7050000006	0.78		FOB	DFU ASSY
64	9JR0100000015	0.02		FOB	Screws(stand)
109	9JR0100000002	0.01		FOB	screws(base)
100	9JR0100000009	0.01		FOB	screws(base)
PACKING PARTS					
143	9JR4500000003	0.01		FOB	P.E. BAG(100 X 70)
	9JR7050000010	2.55		FOB	CUSHION ASSY
455	9JR4500000002	0.39		FOB	P.E. BAG
450	9JR4400000009	3.31		FOB	CARTON
MISCELLANEA					
101	9JR0100000007	0.01		FOB	SCREW
102	9JR0100000001	0.01		FOB	SCREW
103	9JR0100000003	0.01		FOB	SCREW 4*6MM
104	9JR0100000004	0.01		FOB	SCREW
105	9JR0100000010	0.01		FOB	SCREW
106	9JR0100000008	0.01		FOB	T4X12 SCREW
107	9JR0100000005	0.01		FOB	SCREW
108	9JR0100000006	0.01		FOB	SCREW
109	9JR0100000002	0.01		FOB	SCREW M4X6
126	9JR4000000011	0.02		FOB	RATING LABEL
	9JR4100000002	0.04		FOB	SHARP REGISTRATION CARD_NA
137	9JR4000000007	0.23		FOB	LABEL_SIDE_IO
1185	9JR7800000001	1.79		FOB	SPEAKER 6OHM 10W 156mmx30mm
8401	9JR9500000003	0.4		FOB	HARNESS 4P-4P 700mm 75217
8402	9JR9500000004	0.49		FOB	HARNESS 7P-5P 680mm 75216
8604	9JR9500000001	0.35		FOB	HARNESS 2P-FAST 410mm 75218
8605	9JR9500000002	0.34		FOB	HARNESS 3P-FAST 950mm 75219
8750	9JR9500000008	3.17		FOB	HARNESS 51P-20*2P 300mm 75212
8901	9JR9500000007	0.67		FOB	HARNESS 14P-13P 150mm 75213

8902	9JR9500000005	0.61		FOB	HARNESS 12P-12P 230mm 75215
8903	9JR9500000006	0.64		FOB	HARNESS 13P-12P 220mm 75214
PANEL					
1050	9JR7500000001	548.34		FOB	PANEL V420H1-L13 C1 TW CMO
PCB ASSY					
1053	9JR9900000002	46		FOB	MAIN PCB ASSY (CMO)
1054	9JR9900000001	19.71		FOB	POWER PCB ASSY
1056	9JR9900000003	0.77		FOB	IR PCB ASSY
1057	9JR9900000004	0.55		FOB	KEY PCB ASSY
1053	**9JR990000002**	**MAIN PCB ASSY(COM)**			
C101	9JR6700000018	0.01		FOB	EC 100uF 16V KM 6.3x11mm
C101	9JR6700000019	0.01		FOB	EC 100uF 16V PF 6.3x11mm
C102	9JR6500000053	0.01		FOB	CAP CHIP 0603 33N 16V X7R +/-10%
C104	9JR6500000053	0.01		FOB	CAP CHIP 0603 33N 16V X7R +/-10%
C105	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C108	9JR6500000098	0.03		FOB	CHIP 10uF 16V X7R 10%
C108	9JR6500000099	0.03		FOB	CHIP 10uF 16V X5R 10%
C108	9JR6500000100	0.04		FOB	CAP CHIP 1206 10UF K 16V X5R
C109	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C110	9JR6700000004	0.04		FOB	EC 470uF 16V GF 8x16mm
C111	9JR6700000040	0.03		FOB	EC 330UF 16V GF 8*16mm
C112	9JR6700000040	0.03		FOB	EC 330UF 16V GF 8*16mm
C113	9JR6700000042	0.03		FOB	EC 220uF 25V 8*12mm
C118	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C119	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C120	9JR6500000077	0.01		FOB	CAP CHIP 0805 10UF Z 10V Y5V
C123	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C124	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C125	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C126	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C127	9JR6500000096	0.01		FOB	CAP CHIP 4U7 10V Y5V -20%~+80%
C127	9JR6500000097	0.01		FOB	CAP CHIP 4.7UF 10V Y5V -20%~+80%
C128	9JR6500000051	0.01		FOB	CAP CHIP 0603 330PF J 50V NPO
C129	9JR6500000051	0.01		FOB	CAP CHIP 0603 330PF J 50V NPO
C132	9JR6500000098	0.03		FOB	CHIP 10uF 16V X7R 10%
C132	9JR6500000099	0.03		FOB	CHIP 10uF 16V X5R 10%
C132	9JR6500000100	0.04		FOB	CAP CHIP 1206 10UF K 16V X5R
C133	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C134	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C135	9JR6700000004	0.04		FOB	EC 470uF 16V GF 8x16mm
C136	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C136	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C137	9JR6500000102	0.03		FOB	CAP CHIP 1206 22U 10V Y5V -20%+80%
C137	9JR6500000103	0.03		FOB	CER 1206 22U 10V Y5V -20%+80%
C139	9JR6500000077	0.01		FOB	CAP CHIP 0805 10UF Z 10V Y5V
C140	9JR6500000077	0.01		FOB	CAP CHIP 0805 10UF Z 10V Y5V
C150	9JR6700000018	0.01		FOB	EC 100uF 16V KM 6.3x11mm
C150	9JR6700000019	0.01		FOB	EC 100uF 16V PF 6.3x11mm
C151	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C152	9JR6700000050	0.03		FOB	EC 1000uF 16V KM 10x12.5mm
C153	9JR6500000098	0.03		FOB	CHIP 10uF 16V X7R 10%
C153	9JR6500000099	0.03		FOB	CHIP 10uF 16V X5R 10%
C153	9JR6500000100	0.04		FOB	CAP CHIP 1206 10UF K 16V X5R

C155	9JR6700000022	0.01		FOB	EC 220uF 16V KM 8x12mm
C158	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C159	9JR6700000018	0.01		FOB	EC 100uF 16V KM 6.3x11mm
C159	9JR6700000019	0.01		FOB	EC 100uF 16V PF 6.3x11mm
C160	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C161	9JR6700000018	0.01		FOB	EC 100uF 16V KM 6.3x11mm
C161	9JR6700000019	0.01		FOB	EC 100uF 16V PF 6.3x11mm
C162	9JR6700000018	0.01		FOB	EC 100uF 16V KM 6.3x11mm
C162	9JR6700000019	0.01		FOB	EC 100uF 16V PF 6.3x11mm
C164	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C166	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C167	9JR6700000027	0.01		FOB	EC 47uF 25V KM 5x11mm
C168	9JR6500000098	0.03		FOB	CHIP 10uF 16V X7R 10%
C168	9JR6500000099	0.03		FOB	CHIP 10uF 16V X5R 10%
C168	9JR6500000100	0.04		FOB	CAP CHIP 1206 10UF K 16V X5R
C169	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C176	9JR6500000029	0.01		FOB	CAP CHIP 0603 1NF K 50V X7R
C177	9JR6700000003	0.01		FOB	EC 47uF 25V RGA 5x11mm
C177	9JR6700000051	0.01		FOB	EC 47uF 25V KM 5x11mm
C178	9JR6700000003	0.01		FOB	EC 47uF 25V RGA 5x11mm
C178	9JR6700000051	0.01		FOB	EC 47uF 25V KM 5x11mm
C200	9JR6500000031	0.01		FOB	CAP CHIP 0603 10NF K 50V X7R
C201	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C202	9JR6700000045	0.03		FOB	EC 470uF 16V LZ 8x12mm
C203	9JR6500000020	0.01		FOB	CAP CHIP 0402 33P 50V NPO +/-5%
C203	9JR6500000021	0.01		FOB	CAP CHIP 0402 33P 50V NPO +/-5%
C204	9JR6500000031	0.01		FOB	CAP CHIP 0603 10NF K 50V X7R
C205	9JR6500000077	0.01		FOB	CAP CHIP 0805 10UF Z 10V Y5V
C206	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C207	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C208	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C209	9JR6500000020	0.01		FOB	CAP CHIP 0402 33P 50V NPO +/-5%
C209	9JR6500000021	0.01		FOB	CAP CHIP 0402 33P 50V NPO +/-5%
C210	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C211	9JR6500000059	0.01		FOB	CAP CHIP 0603 47N 16V X7R +/-10%
C212	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C213	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C213	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C214	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C215	9JR6500000027	0.01		FOB	CAP CHIP 0603 1NF J 25V MPO
C216	9JR6500000027	0.01		FOB	CAP CHIP 0603 1NF J 25V MPO
C250	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C251	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C251	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C252	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C252	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C253	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C254	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C254	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C255	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C256	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C256	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C258	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C259	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C260	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C261	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%

C262	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C263	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C264	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C265	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C266	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C267	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C268	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C269	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C270	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C271	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C272	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C273	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C274	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C274	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C275	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C276	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C302	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C303	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C304	9JR6500000025	0.01		FOB	MLCC 0603 10PF J 50V NPO
C305	9JR6500000025	0.01		FOB	MLCC 0603 10PF J 50V NPO
C306	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C307	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C308	9JR6500000027	0.01		FOB	CAP CHIP 0603 1NF J 25V MPO
C309	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C309	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C310	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C310	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C311	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C311	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C312	9JR6700000022	0.01		FOB	EC 220uF 16V KM 8x12mm
C318	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C319	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C350	9JR6700000018	0.01		FOB	EC 100uF 16V KM 6.3x11mm
C350	9JR6700000019	0.01		FOB	EC 100uF 16V PF 6.3x11mm
C351	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C352	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C352	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C353	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C354	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C355	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C356	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C357	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C358	9JR6500000041	0.01		FOB	CAP CHIP 0603 1U 6V3 X5R +/-10%
C359	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C360	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C361	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C362	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C363	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C364	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C364	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C365	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C366	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C367	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C368	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C369	9JR6700000011	0.01		FOB	EC 100uF 16V RGA 6.3x11mm
C370	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%

C371	9JR6500000041	0.01		FOB	CAP CHIP 0603 1U 6V3 X5R +/-10%
C372	9JR6700000018	0.01		FOB	EC 100uF 16V KM 6.3x11mm
C372	9JR6700000019	0.01		FOB	EC 100uF 16V PF 6.3x11mm
C373	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C374	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C375	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C376	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C377	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C378	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C379	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C380	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C381	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C382	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C383	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C384	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C385	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C386	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C401	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C408	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C408	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C409	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C409	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C411	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C411	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C412	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C412	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C413	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C413	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C414	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C414	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C450	9JR6700000011	0.01		FOB	EC 100uF 16V RGA 6.3x11mm
C451	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C451	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C452	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C453	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C454	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C455	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C456	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C457	9JR6500000006	0.01		FOB	CAP CHIP 0402 100P 50V NPO +/-5%
C457	9JR6500000007	0.01		FOB	CAP CHIP 0402 100P 50V NPO +/-5%
C458	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C459	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C460	9JR6700000027	0.01		FOB	EC 47uF 25V KM 5x11mm
C463	9JR6700000027	0.01		FOB	EC 47uF 25V KM 5x11mm
C500	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C502	9JR6500000023	0.01		FOB	CAP CHIP 0402 5PF 50V NPO +/-0.25pF
C503	9JR6500000023	0.01		FOB	CAP CHIP 0402 5PF 50V NPO +/-0.25pF
C550	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C551	9JR6500000075	0.01		FOB	CAP CHIP 0805 1UF K 16V X7R
C552	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C553	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C554	9JR6500000075	0.01		FOB	CAP CHIP 0805 1UF K 16V X7R
C555	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C556	9JR6500000075	0.01		FOB	CAP CHIP 0805 1UF K 16V X7R
C557	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C558	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%

C559	9JR6500000009	0.01		FOB	CAP CHIP 0402 1N 50V X7R +/-10%
C560	9JR6500000009	0.01		FOB	CAP CHIP 0402 1N 50V X7R +/-10%
C561	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C562	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C563	9JR6500000015	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C563	9JR6500000017	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C564	9JR6500000015	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C564	9JR6500000017	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C565	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C566	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C567	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C568	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C569	9JR6500000015	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C569	9JR6500000017	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C570	9JR6500000015	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C570	9JR6500000017	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C571	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C572	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C573	9JR6500000015	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C573	9JR6500000017	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C574	9JR6500000015	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C574	9JR6500000017	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C575	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C576	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C577	9JR6500000077	0.01		FOB	CAP CHIP 0805 10UF Z 10V Y5V
C578	9JR6500000077	0.01		FOB	CAP CHIP 0805 10UF Z 10V Y5V
C581	9JR6500000077	0.01		FOB	CAP CHIP 0805 10UF Z 10V Y5V
C582	9JR6500000077	0.01		FOB	CAP CHIP 0805 10UF Z 10V Y5V
C585	9JR6500000018	0.01		FOB	CAP CHIP 0402 22P 50V NPO +/-5%
C585	9JR6500000019	0.01		FOB	CAP CHIP 0402 22P 50V NPO +/-5%
C586	9JR6500000006	0.01		FOB	CAP CHIP 0402 100P 50V NPO +/-5%
C586	9JR6500000007	0.01		FOB	CAP CHIP 0402 100P 50V NPO +/-5%
C587	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C588	9JR6500000015	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C588	9JR6500000017	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C589	9JR6500000015	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C589	9JR6500000017	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C590	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C591	9JR6500000077	0.01		FOB	CAP CHIP 0805 10UF Z 10V Y5V
C592	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C593	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C594	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C595	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C596	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C597	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C598	9JR6500000015	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C598	9JR6500000017	0.01		FOB	CAP CHIP 0402 15P 50V NPO +/-5%
C599	9JR6500000077	0.01		FOB	CAP CHIP 0805 10UF Z 10V Y5V
C600	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C601	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C602	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C603	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C603	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C604	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C605	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C606	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R

C606	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C607	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C608	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C609	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C609	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C610	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C611	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C611	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C612	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C613	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C614	9JR6700000009	0.01		FOB	EC 100uF 10V RGA 5x11mm
C615	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C615	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C616	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C617	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C619	9JR6700000049	0.01		FOB	10UF +-20% 50V
C620	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C621	9JR6500000088	0.01		FOB	CAP CHIP 0805 470N 16V X7R +/-10%
C621	9JR6500000089	0.01		FOB	CAP CHIP 0805 470N 16V X7R +/-10%
C622	9JR6700000014	0.02		FOB	EC 100uF 35V KM 8x11.5mm
C623	9JR6700000030	0.04		FOB	EC 470uF 35V RGA 10x16mm
C624	9JR6700000021	0.01		FOB	EC 220UF/25V KM 8*11mm
C624	9JR6700000042	0.03		FOB	EC 220uF 25V 8*12mm
C625	9JR6500000104	0.01		FOB	CER 1206 470N 50V Y5V +/-20%
C626	9JR6500000088	0.01		FOB	CAP CHIP 0805 470N 16V X7R +/-10%
C626	9JR6500000089	0.01		FOB	CAP CHIP 0805 470N 16V X7R +/-10%
C627	9JR6500000051	0.01		FOB	CAP CHIP 0603 330PF J 50V NPO
C628	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C628	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C629	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C629	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C630	9JR6700000032	0.04		FOB	EC 680uF 25V RGA 10x16mm
C631	9JR6500000088	0.01		FOB	CAP CHIP 0805 470N 16V X7R +/-10%
C631	9JR6500000089	0.01		FOB	CAP CHIP 0805 470N 16V X7R +/-10%
C632	9JR6500000065	0.01		FOB	CAP CHIP 0603 470PF J 50V NPO
C633	9JR6500000079	0.01		FOB	CAP CHIP 0805 15N 50V X7R +/-10%
C634	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C634	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C635	9JR6500000090	0.01		FOB	CAP CHIP 0805 470N 50V Y5V -20%+80%
C635	9JR6500000091	0.01		FOB	CAP CHIP 0805 0.47UF Z 50V Y5V
C636	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C636	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C637	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C637	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C638	9JR6500000079	0.01		FOB	CAP CHIP 0805 15N 50V X7R +/-10%
C639	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C640	9JR6500000090	0.01		FOB	CAP CHIP 0805 470N 50V Y5V -20%+80%
C640	9JR6500000091	0.01		FOB	CAP CHIP 0805 0.47UF Z 50V Y5V
C641	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C641	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C642	9JR6700000027	0.01		FOB	EC 47uF 25V KM 5x11mm
C643	9JR6500000065	0.01		FOB	CAP CHIP 0603 470PF J 50V NPO
C644	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C644	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C645	9JR6500000088	0.01		FOB	CAP CHIP 0805 470N 16V X7R +/-10%
C645	9JR6500000089	0.01		FOB	CAP CHIP 0805 470N 16V X7R +/-10%

C646	9JR6500000051	0.01		FOB	CAP CHIP 0603 330PF J 50V NPO
C647	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C647	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C648	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C648	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C649	9JR6500000037	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C649	9JR6500000038	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C650	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C651	9JR6500000009	0.01		FOB	CAP CHIP 0402 1N 50V X7R +/-10%
C652	9JR6500000059	0.01		FOB	CAP CHIP 0603 47N 16V X7R +/-10%
C653	9JR6500000049	0.01		FOB	CAP CHIP 0603 33PF J 50V NPO
C654	9JR6500000055	0.01		FOB	CAP CHIP 0603 47PF J 50V NPO
C655	9JR6500000009	0.01		FOB	CAP CHIP 0402 1N 50V X7R +/-10%
C656	9JR6500000046	0.01		FOB	CAP CHIP 0603 1U 10V Y5V -20%+80%
C657	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C658	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C658	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C659	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C660	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C661	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C661	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C662	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C663	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C664	9JR6500000060	0.01		FOB	CAP CHIP 0603 47N 50V Y5V -20%+80%
C664	9JR6500000061	0.01		FOB	CAP CHIP 0603 47N 50V Y5V -20%+80%
C665	9JR6500000055	0.01		FOB	CAP CHIP 0603 47PF J 50V NPO
C666	9JR6500000046	0.01		FOB	CAP CHIP 0603 1U 10V Y5V -20%+80%
C667	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C667	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C668	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C669	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C670	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C670	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C671	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C672	9JR6500000077	0.01		FOB	CAP CHIP 0805 10UF Z 10V Y5V
C673	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C674	9JR6500000077	0.01		FOB	CAP CHIP 0805 10UF Z 10V Y5V
C675	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C676	9JR6500000060	0.01		FOB	CAP CHIP 0603 47N 50V Y5V -20%+80%
C676	9JR6500000061	0.01		FOB	CAP CHIP 0603 47N 50V Y5V -20%+80%
C677	9JR6500000055	0.01		FOB	CAP CHIP 0603 47PF J 50V NPO
C678	9JR6500000046	0.01		FOB	CAP CHIP 0603 1U 10V Y5V -20%+80%
C679	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C680	9JR6500000060	0.01		FOB	CAP CHIP 0603 47N 50V Y5V -20%+80%
C680	9JR6500000061	0.01		FOB	CAP CHIP 0603 47N 50V Y5V -20%+80%
C681	9JR6500000020	0.01		FOB	CAP CHIP 0402 33P 50V NPO +/-5%
C681	9JR6500000021	0.01		FOB	CAP CHIP 0402 33P 50V NPO +/-5%
C682	9JR6500000055	0.01		FOB	CAP CHIP 0603 47PF J 50V NPO
C684	9JR6700000032	0.04		FOB	EC 680uF 25V RGA 10x16mm
C685	9JR6500000088	0.01		FOB	CAP CHIP 0805 470N 16V X7R +/-10%
C685	9JR6500000089	0.01		FOB	CAP CHIP 0805 470N 16V X7R +/-10%
C690	9JR6500000031	0.01		FOB	CAP CHIP 0603 10NF K 50V X7R
C691	9JR6500000031	0.01		FOB	CAP CHIP 0603 10NF K 50V X7R
C700	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C701	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C702	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R

C702	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C703	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C704	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C704	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C706	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C708	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C709	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C711	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C713	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C714	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C715	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C716	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C717	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C718	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C719	9JR6500000011	0.01		FOB	CAP CHIP 0402 10N 16V X7R +/-10%
C750	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C751	9JR6500000036	0.01		FOB	CAP CHIP 0603 0.1UF K 16V X7R
C752	9JR6700000012	0.01		FOB	EC 100uF 25V KM 6.3x11mm
C753	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C753	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C754	9JR6500000092	0.01		FOB	CAP CHIP 4.7UF 10V X7R +/- 10%
C755	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C756	9JR6700000016	0.01		FOB	EC 100uF 10V KM 5x11mm
C757	9JR6500000043	0.01		FOB	MLCC 0603 CAP 1uF K 16V X7R
C757	9JR6500000044	0.01		FOB	CAP CHIP 0603 1UF K 16V X7R
C758	9JR6500000014	0.01		FOB	CAP CHIP 0402 100N 16V X7R +/-10%
C760	9JR6500000046	0.01		FOB	CAP CHIP 0603 1U 10V Y5V -20%+80%
CN100	9JR3300000005	0.05		FOB	WAFER 2.0MM 12P 63392
CN401	9JR3300000003	0.01		FOB	WAFER 2.0MM 4P 63384
CN402	9JR3300000004	0.03		FOB	WAFER 2.0MM 7P 63387
CN403	9JR3300000006	0.06		FOB	WAFER 2.0MM 3P 63043
CN450	9JR8800000015	0.14		FOB	USB CONNECTOR A TYPE 5409-03-300-71
CN550	9JR8800000007	0.12		FOB	RCA JACK 1*2 W/R V/A MKC21-092AN-P
CN550	9JR8800000008	0.11		FOB	RCA JACK 1*2 W/R V/A 5105-840-072-77
CN551	9JR8800000001	0.21		FOB	RCA JACK 1*3 G/B/R V/A
CN551	9JR8800000005	0.19		FOB	RCA JACK 1*3 G/BL/R V/A MKC21-005PV-P
CN551	9JR8800000006	0.15		FOB	RCA JACK 1*3 G/BL/R V/A 5105-870-213-98
CN552	9JR8800000001	0.21		FOB	RCA JACK 1*3 G/B/R V/A
CN552	9JR8800000005	0.19		FOB	RCA JACK 1*3 G/BL/R V/A MKC21-005PV-P
CN552	9JR8800000006	0.15		FOB	RCA JACK 1*3 G/BL/R V/A 5105-870-213-98
CN553	9JR8800000002	0.21		FOB	RCA JACK 1*3 W/R/B V/A 2PJ1535-001111
CN553	9JR8800000003	0.19		FOB	RCA JACK 1*3 W/R/B V/A MKC21-007PV-P
CN553	9JR8800000004	0.15		FOB	RCA JACK 1*3 W/R/B V/A 5105-870-253-98
CN554	9JR8800000016	0.38		FOB	D-SUB CONN V 15P F (WITH SCREW UNLOCKED)
CN555	9JR8800000011	0.18		FOB	PHONE JACK 3.5mm 3P V/T GREEN
CN604	9JR3300000001	0.01		FOB	WAFER 2.0MM 2P 63382
CN605	9JR3300000002	0.02		FOB	WAFER 2.0MM 3P 63383
CN650	9JR8800000009	0.35		FOB	RCA JACK 1*3 Y/W/R + S JACK
CN650	9JR8800000010	0.42		FOB	S JACK + RCA JACK 1*3 Y/W/R
CN700	9JR8800000014	0.52		FOB	HDMI HEADER 19P 5300-519-441-72
CN701	9JR8800000012	0.30		FOB	HDMI HEADER 19P 2HE-51U1-G11
CN701	9JR8800000013	0.31		FOB	HDMI HEADER 19P 5300-519-281-E1
CN702	9JR8800000014	0.52		FOB	HDMI HEADER 19P 5300-519-441-72
CN750	9JR3300000014	0.41		FOB	CON. V 2*20P M 1.25 SM 60949
D150	9JR9300000007	0.05		FOB	DIODE RGP15D DO-41
D450	9JR9300000006	0.01		FOB	DIODE BAV99 SOT23

D451	9JR9300000006	0.01		FOB	DIODE BAV99 SOT23
D560	9JR9300000030	0.01		FOB	DIODE BAS316 SOT-323 PHILIPS
D561	9JR9300000030	0.01		FOB	DIODE BAS316 SOT-323 PHILIPS
D562	9JR9300000030	0.01		FOB	DIODE BAS316 SOT-323 PHILIPS
D563	9JR9300000030	0.01		FOB	DIODE BAS316 SOT-323 PHILIPS
D564	9JR9300000029	0.01		FOB	BAS32L SOD80C
D565	9JR9300000029	0.01		FOB	BAS32L SOD80C
D566	9JR9300000030	0.01		FOB	DIODE BAS316 SOT-323 PHILIPS
D567	9JR9300000030	0.01		FOB	DIODE BAS316 SOT-323 PHILIPS
D568	9JR9300000030	0.01		FOB	DIODE BAS316 SOT-323 PHILIPS
D569	9JR9300000030	0.01		FOB	DIODE BAS316 SOT-323 PHILIPS
D570	9JR9300000030	0.01		FOB	DIODE BAS316 SOT-323 PHILIPS
D571	9JR9300000030	0.01		FOB	DIODE BAS316 SOT-323 PHILIPS
D600	9JR9300000001	0.01		FOB	LL4148-GSO8
D600	9JR9300000029	0.01		FOB	BAS32L SOD80C
D601	9JR9300000001	0.01		FOB	LL4148-GSO8
D601	9JR9300000029	0.01		FOB	BAS32L SOD80C
D603	9JR9300000001	0.01		FOB	LL4148-GSO8
D603	9JR9300000029	0.01		FOB	BAS32L SOD80C
D700	9JR9300000030	0.01		FOB	DIODE BAS316 SOT-323 PHILIPS
D701	9JR9300000001	0.01		FOB	LL4148-GSO8
D701	9JR9300000029	0.01		FOB	BAS32L SOD80C
D702	9JR9300000001	0.01		FOB	LL4148-GSO8
D702	9JR9300000029	0.01		FOB	BAS32L SOD80C
D703	9JR9300000001	0.01		FOB	LL4148-GSO8
D703	9JR9300000029	0.01		FOB	BAS32L SOD80C
D704	9JR9300000030	0.01		FOB	DIODE BAS316 SOT-323 PHILIPS
D705	9JR9300000001	0.01		FOB	LL4148-GSO8
D705	9JR9300000029	0.01		FOB	BAS32L SOD80C
D706	9JR9300000001	0.01		FOB	LL4148-GSO8
D706	9JR9300000029	0.01		FOB	BAS32L SOD80C
D707	9JR9300000030	0.01		FOB	DIODE BAS316 SOT-323 PHILIPS
D708	9JR9300000001	0.01		FOB	LL4148-GSO8
D708	9JR9300000029	0.01		FOB	BAS32L SOD80C
D709	9JR9300000001	0.01		FOB	LL4148-GSO8
D709	9JR9300000029	0.01		FOB	BAS32L SOD80C
FB100	9JR7100000010	0.01		FOB	CHIP BEAD 220R/3000mA MPZ2012S221A
FB101	9JR7100000010	0.01		FOB	CHIP BEAD 220R/3000mA MPZ2012S221A
FB200	9JR7100000012	0.01		FOB	CHIP BEAD 120R/600mA FCM1608KF-121T06
FB200	9JR7100000013	0.01		FOB	CHIP BEAD 120R/500mA MMZ1608S121CT
FB201	9JR7100000010	0.01		FOB	CHIP BEAD 220R/3000mA MPZ2012S221A
FB202	9JR7100000012	0.01		FOB	CHIP BEAD 120R/600mA FCM1608KF-121T06
FB202	9JR7100000013	0.01		FOB	CHIP BEAD 120R/500mA MMZ1608S121CT
FB300	9JR7100000012	0.01		FOB	CHIP BEAD 120R/600mA FCM1608KF-121T06
FB300	9JR7100000013	0.01		FOB	CHIP BEAD 120R/500mA MMZ1608S121CT
FB301	9JR7100000012	0.01		FOB	CHIP BEAD 120R/600mA FCM1608KF-121T06
FB301	9JR7100000013	0.01		FOB	CHIP BEAD 120R/500mA MMZ1608S121CT
FB302	9JR7100000012	0.01		FOB	CHIP BEAD 120R/600mA FCM1608KF-121T06
FB302	9JR7100000013	0.01		FOB	CHIP BEAD 120R/500mA MMZ1608S121CT
FB400	9JR7100000011	0.01		FOB	CHIP BEAD 600R/200mA FCM1608K-601T02
FB400	9JR7100000014	0.01		FOB	CHIP BEAD 600R/500mA MMZ1608S601CT
FB450	9JR7100000012	0.01		FOB	CHIP BEAD 120R/600mA FCM1608KF-121T06
FB450	9JR7100000013	0.01		FOB	CHIP BEAD 120R/500mA MMZ1608S121CT
FB451	9JR7100000012	0.01		FOB	CHIP BEAD 120R/600mA FCM1608KF-121T06
FB451	9JR7100000013	0.01		FOB	CHIP BEAD 120R/500mA MMZ1608S121CT
FB452	9JR7100000012	0.01		FOB	CHIP BEAD 120R/600mA FCM1608KF-121T06

FB452	9JR7100000013	0.01		FOB	CHIP BEAD 120R/500mA MMZ1608S121CT
FB550	9JR7100000011	0.01		FOB	CHIP BEAD 600R/200mA FCM1608K-601T02
FB550	9JR7100000014	0.01		FOB	CHIP BEAD 600R/500mA MMZ1608S601CT
FB551	9JR7100000011	0.01		FOB	CHIP BEAD 600R/200mA FCM1608K-601T02
FB551	9JR7100000014	0.01		FOB	CHIP BEAD 600R/500mA MMZ1608S601CT
FB552	9JR7100000011	0.01		FOB	CHIP BEAD 600R/200mA FCM1608K-601T02
FB552	9JR7100000014	0.01		FOB	CHIP BEAD 600R/500mA MMZ1608S601CT
FB553	9JR7100000011	0.01		FOB	CHIP BEAD 600R/200mA FCM1608K-601T02
FB553	9JR7100000014	0.01		FOB	CHIP BEAD 600R/500mA MMZ1608S601CT
FB554	9JR7100000011	0.01		FOB	CHIP BEAD 600R/200mA FCM1608K-601T02
FB554	9JR7100000014	0.01		FOB	CHIP BEAD 600R/500mA MMZ1608S601CT
FB555	9JR7100000011	0.01		FOB	CHIP BEAD 600R/200mA FCM1608K-601T02
FB555	9JR7100000014	0.01		FOB	CHIP BEAD 600R/500mA MMZ1608S601CT
FB600	9JR7100000012	0.01		FOB	CHIP BEAD 120R/600mA FCM1608KF-121T06
FB600	9JR7100000013	0.01		FOB	CHIP BEAD 120R/500mA MMZ1608S121CT
FB601	9JR7100000012	0.01		FOB	CHIP BEAD 120R/600mA FCM1608KF-121T06
FB601	9JR7100000013	0.01		FOB	CHIP BEAD 120R/500mA MMZ1608S121CT
FB602	9JR7100000012	0.01		FOB	CHIP BEAD 120R/600mA FCM1608KF-121T06
FB602	9JR7100000013	0.01		FOB	CHIP BEAD 120R/500mA MMZ1608S121CT
FB603	9JR7100000012	0.01		FOB	CHIP BEAD 120R/600mA FCM1608KF-121T06
FB603	9JR7100000013	0.01		FOB	CHIP BEAD 120R/500mA MMZ1608S121CT
FB604	9JR7100000012	0.01		FOB	CHIP BEAD 120R/600mA FCM1608KF-121T06
FB604	9JR7100000013	0.01		FOB	CHIP BEAD 120R/500mA MMZ1608S121CT
FB605	9JR7100000001	0.01		FOB	FERRITE BEAD D9X3. 5X0.8
FB650	9JR7100000011	0.01		FOB	CHIP BEAD 600R/200mA FCM1608K-601T02
FB650	9JR7100000014	0.01		FOB	CHIP BEAD 600R/500mA MMZ1608S601CT
FB651	9JR7100000011	0.01		FOB	CHIP BEAD 600R/200mA FCM1608K-601T02
FB651	9JR7100000014	0.01		FOB	CHIP BEAD 600R/500mA MMZ1608S601CT
FB700	9JR7100000011	0.01		FOB	CHIP BEAD 600R/200mA FCM1608K-601T02
FB700	9JR7100000014	0.01		FOB	CHIP BEAD 600R/500mA MMZ1608S601CT
FB701	9JR7100000011	0.01		FOB	CHIP BEAD 600R/200mA FCM1608K-601T02
FB701	9JR7100000014	0.01		FOB	CHIP BEAD 600R/500mA MMZ1608S601CT
FB702	9JR7100000011	0.01		FOB	CHIP BEAD 600R/200mA FCM1608K-601T02
FB702	9JR7100000014	0.01		FOB	CHIP BEAD 600R/500mA MMZ1608S601CT
FB750	9JR7100000012	0.01		FOB	CHIP BEAD 120R/600mA FCM1608KF-121T06
FB750	9JR7100000013	0.01		FOB	CHIP BEAD 120R/500mA MMZ1608S121CT
FB751	9JR7100000010	0.01		FOB	CHIP BEAD 220R/3000mA MPZ2012S221A
FB752	9JR7100000010	0.01		FOB	CHIP BEAD 220R/3000mA MPZ2012S221A
FB753	9JR7100000010	0.01		FOB	CHIP BEAD 220R/3000mA MPZ2012S221A
FB754	9JR7100000012	0.01		FOB	CHIP BEAD 120R/600mA FCM1608KF-121T06
FB754	9JR7100000013	0.01		FOB	CHIP BEAD 120R/500mA MMZ1608S121CT
L101	9JR7300000019	0.10		FOB	HOKE COIL 15uH+/-10% 38mohm DR10*8
L101	9JR7300000020	0.11		FOB	CHOKE COIL 15uH+/-10% 38mohm DR10*8
L101	9JR7300000021	0.08		FOB	CHOKE COIL 15uH+/-10% 38mohm DR10*8
L102	9JR7300000019	0.10		FOB	HOKE COIL 15uH+/-10% 38mohm DR10*8
L102	9JR7300000020	0.11		FOB	CHOKE COIL 15uH+/-10% 38mohm DR10*8
L102	9JR7300000021	0.08		FOB	CHOKE COIL 15uH+/-10% 38mohm DR10*8
L200	9JR7300000005	0.01		FOB	CHIP INDUCROR 0U39 5% MLF1608DR39JT
L200	9JR7300000006	0.01		FOB	CHIP INDUCROR 0U33 5% FCI1608F-R39J
L201	9JR7300000005	0.01		FOB	CHIP INDUCROR 0U39 5% MLF1608DR39JT
L201	9JR7300000006	0.01		FOB	CHIP INDUCROR 0U33 5% FCI1608F-R39J
L300	9JR7300000007	0.01		FOB	CHIP INDUCROR 0U82 10% MLF1608DR82K
L300	9JR7300000008	0.01		FOB	CHIP INDUCROR 0U82 10% FCI1608F-R82K
L550	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L551	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L552	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K

L553	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L554	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L555	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L556	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L557	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L558	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L561	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L562	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L563	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L564	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L565	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L600	9JR7300000024	0.05		FOB	CHOKE 33uH 10% TSL0808S-330K1R4
L601	9JR7300000024	0.05		FOB	CHOKE 33uH 10% TSL0808S-330K1R4
L650	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L651	9JR7300000003	0.01		FOB	CHIP INDUCROR 0U33 5% MLF1608DR33JT
L652	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L653	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L654	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L655	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L656	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L657	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L700	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
L701	9JR7300000002	0.01		FOB	CHIP INDUCTOR 0U10 10% FCI1608F-R10K
Q100	9JR5700000005	0.01		FOB	BC847C
Q100	9JR5700000010	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q101	9JR5700000005	0.01		FOB	BC847C
Q101	9JR5700000010	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q103	9JR5700000020	0.17		FOB	FET SI3441BDV TSOP-6
Q104	9JR5700000019	0.14		FOB	SI5441DC 1206-8
Q106	9JR5700000005	0.01		FOB	BC847C
Q106	9JR5700000010	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q108	9JR5700000005	0.01		FOB	BC847C
Q108	9JR5700000010	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q109	9JR5700000005	0.01		FOB	BC847C
Q109	9JR5700000010	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q150	9JR5700000019	0.14		FOB	SI5441DC 1206-8
Q151	9JR5700000005	0.01		FOB	BC847C
Q151	9JR5700000010	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q301	9JR5700000001	0.01		FOB	MMBT3904
Q400	9JR5700000003	0.02		FOB	2N7002ESOT23 SILICONIX
Q400	9JR5700000021	0.01		FOB	FET 2N7002 PHILIPS
Q503	9JR5700000003	0.02		FOB	2N7002ESOT23 SILICONIX
Q503	9JR5700000021	0.01		FOB	FET 2N7002 PHILIPS
Q504	9JR5700000003	0.02		FOB	2N7002ESOT23 SILICONIX
Q504	9JR5700000021	0.01		FOB	FET 2N7002 PHILIPS
Q550	9JR5700000010	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q600	9JR5700000012	0.01		FOB	TRA BC847BW 100mA/45V SOT-323
Q605	9JR5700000018	0.01		FOB	TRA BC857BW 100mA/50V SOT-323
Q700	9JR5700000002	0.01		FOB	BC847C
Q700	9JR5700000010	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q702	9JR5700000002	0.01		FOB	BC847C
Q702	9JR5700000010	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q703	9JR5700000002	0.01		FOB	BC847C
Q703	9JR5700000010	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q704	9JR5700000002	0.01		FOB	BC847C
Q704	9JR5700000010	0.01		FOB	TRA BC847C 100mA/50V SOT-23

Q705	9JR5700000002	0.01		FOB	BC847C
Q705	9JR5700000010	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q706	9JR5700000002	0.01		FOB	BC847C
Q706	9JR5700000010	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q707	9JR5700000022	0.04		FOB	FET 2SK1828 TO-236MOD
Q708	9JR5700000022	0.04		FOB	FET 2SK1828 TO-236MOD
Q750	9JR5700000001	0.01		FOB	MMBT3904
Q751	9JR5700000001	0.01		FOB	MMBT3904
R100	9JR5700000095	0.01		FOB	RST CHIPR 22KOHM +-5% 1/10W YAGEO
R101	9JR5700000113	0.01		FOB	RST CHIPR 4.7KOHM +-5% 1/10W YAGEO
R102	9JR5700000119	0.01		FOB	RST CHIPR 5.1KOHM +-5% 1/10W YAGEO
R103	9JR5700000095	0.01		FOB	RST CHIPR 22KOHM +-5% 1/10W YAGEO
R104	9JR5700000104	0.01		FOB	RST CHIPR 3.9KOHM +-5% 1/10W YAGEO
R106	9JR5700000104	0.01		FOB	RST CHIPR 3.9KOHM +-5% 1/10W YAGEO
R107	9JR5700000072	0.01		FOB	RST CHIPR 10KOHM +-5% 1/10W YAGEO
R111	9JR5700000123	0.01		FOB	RST CHIPR 0 OHM +-5% 1/8W YAGEO
R113	9JR5700000041	0.01		FOB	RST CHIP 1K 1/16W 5%
R114	9JR5700000113	0.01		FOB	RST CHIPR 4.7KOHM +-5% 1/10W YAGEO
R115	9JR5700000091	0.01		FOB	RST CHIPR 2.2KOHM +-5% 1/10W YAGEO
R117	9JR5700000081	0.01		FOB	RST CHIPR 1.2KOHM +-5% 1/10W YAGEO
R119	9JR5700000095	0.01		FOB	RST CHIPR 22KOHM +-5% 1/10W YAGEO
R122	9JR5700000081	0.01		FOB	RST CHIPR 1.2KOHM +-5% 1/10W YAGEO
R123	9JR5700000063	0.01		FOB	RST CHIP 1K 1/10W 1%
R123	9JR5700000064	0.01		FOB	RST CHIPR 1KOHM +-1% 1/10W YAGEO
R124	9JR5700000084	0.01		FOB	RST CHIPR 200 OHM +-1% 1/10W YAGEO
R125	9JR5700000107	0.01		FOB	RST CHIPR 47 OHM +-5% 1/10W YAGEO
R126	9JR5700000041	0.01		FOB	RST CHIP 1K 1/16W 5%
R127	9JR5700000071	0.01		FOB	RST CHIP 10K 1/10W 5%
R127	9JR5700000072	0.01		FOB	RST CHIPR 10KOHM +-5% 1/10W YAGEO
R128	9JR5700000071	0.01		FOB	RST CHIP 10K 1/10W 5%
R128	9JR5700000072	0.01		FOB	RST CHIPR 10KOHM +-5% 1/10W YAGEO
R129	9JR5700000047	0.01		FOB	RST CHIP 2K2 1/16W 5%
R130	9JR5700000119	0.01		FOB	RST CHIPR 5.1KOHM +-5% 1/10W YAGEO
R131	9JR5700000120	0.01		FOB	RST CHIP 75R 1/10W 1%
R131	9JR5700000121	0.01		FOB	RST CHIPR 75 OHM +-1% 1/10W YAGEO
R132	9JR5700000120	0.01		FOB	RST CHIP 75R 1/10W 1%
R132	9JR5700000121	0.01		FOB	RST CHIPR 75 OHM +-1% 1/10W YAGEO
R135	9JR5700000114	0.01		FOB	RST CHIPR 47KOHM +-5% 1/10W YAGEO
R136	9JR5700000114	0.01		FOB	RST CHIPR 47KOHM +-5% 1/10W YAGEO
R143	9JR5700000157	0.01		FOB	RST CHIP MAX 0R05 1/4W
R143	9JR5700000158	0.01		FOB	RST CHIPR 0 OHM +-5% 1/4W YAGEO
R147	9JR5700000157	0.01		FOB	RST CHIP MAX 0R05 1/4W
R147	9JR5700000158	0.01		FOB	RST CHIPR 0 OHM +-5% 1/4W YAGEO
R150	9JR5700000059	0.01		FOB	RST CHIP MAX 0R05 1/10W
R150	9JR5700000060	0.01		FOB	RST CHIPR 0 OHM +-5% 1/10W YAGEO
R151	9JR5700000078	0.01		FOB	RST CHIP 120R 1/10W 1%
R151	9JR5700000079	0.01		FOB	RST CHIPR 120 OHM +-1% 1/10W YAGEO
R155	9JR5700000123	0.01		FOB	RST CHIPR 0 OHM +-5% 1/8W YAGEO
R157	9JR5700000095	0.01		FOB	RST CHIPR 22KOHM +-5% 1/10W YAGEO
R158	9JR5700000071	0.01		FOB	RST CHIP 10K 1/10W 5%
R158	9JR5700000072	0.01		FOB	RST CHIPR 10KOHM +-5% 1/10W YAGEO
R159	9JR5700000071	0.01		FOB	RST CHIP 10K 1/10W 5%
R159	9JR5700000072	0.01		FOB	RST CHIPR 10KOHM +-5% 1/10W YAGEO
R162	9JR5700000078	0.01		FOB	RST CHIP 120R 1/10W 1%
R162	9JR5700000079	0.01		FOB	RST CHIPR 120 OHM +-1% 1/10W YAGEO
R163	9JR5700000131	0.01		FOB	RST CHIP 1R 1/8W 5%

R164	9JR5700000113	0.01		FOB	RST CHIPR 4.7KOHM +-5% 1/10W YAGEO
R175	9JR5700000078	0.01		FOB	RST CHIP 120R 1/10W 1%
R175	9JR5700000079	0.01		FOB	RST CHIPR 120 OHM +-1% 1/10W YAGEO
R176	9JR5700000117	0.01		FOB	RST CHIP 51K 1/10W 1%
R176	9JR5700000118	0.01		FOB	RST CHIPR 51KOHM +-1% 1/10W YAGEO
R177	9JR5700000108	0.01		FOB	RST CHIP 4K7 1/10W 1%
R177	9JR5700000109	0.01		FOB	RST CHIPR 4.7KOHM +-1% 1/10W YAGEO
R178	9JR5700000158	0.01		FOB	RST CHIPR 0 OHM +-5% 1/4W YAGEO
R200	9JR5700000059	0.01		FOB	RST CHIP MAX 0R05 1/10W
R200	9JR5700000060	0.01		FOB	RST CHIPR 0 OHM +-5% 1/10W YAGEO
R201	9JR5700000059	0.01		FOB	RST CHIP MAX 0R05 1/10W
R201	9JR5700000060	0.01		FOB	RST CHIPR 0 OHM +-5% 1/10W YAGEO
R202	9JR5700000112	0.01		FOB	RST CHIP 4K7 1/10W 5%
R202	9JR5700000113	0.01		FOB	RST CHIPR 4.7KOHM +-5% 1/10W YAGEO
R203	9JR5700000096	0.01		FOB	RST CHIPR 220KOHM +-5% 1/10W YAGEO
R205	9JR5700000085	0.01		FOB	RST CHIPR 200 OHM +-5% 1/10W YAGEO
R206	9JR5700000085	0.01		FOB	RST CHIPR 200 OHM +-5% 1/10W YAGEO
R207	9JR5700000112	0.01		FOB	RST CHIP 4K7 1/10W 5%
R207	9JR5700000113	0.01		FOB	RST CHIPR 4.7KOHM +-5% 1/10W YAGEO
R208	9JR5700000071	0.01		FOB	RST CHIP 10K 1/10W 5%
R208	9JR5700000072	0.01		FOB	RST CHIPR 10KOHM +-5% 1/10W YAGEO
R209	9JR5700000112	0.01		FOB	RST CHIP 4K7 1/10W 5%
R209	9JR5700000113	0.01		FOB	RST CHIPR 4.7KOHM +-5% 1/10W YAGEO
R210	9JR5700000073	0.01		FOB	RST CHIP 100K 1/10W 5%
R210	9JR5700000074	0.01		FOB	RST CHIPR 100KOHM +-5% 1/10W YAGEO
R211	9JR5700000101	0.01		FOB	RST CHIPR 330 OHM +-5% 1/10W YAGEO
R212	9JR5700000059	0.01		FOB	RST CHIP MAX 0R05 1/10W
R212	9JR5700000060	0.01		FOB	RST CHIPR 0 OHM +-5% 1/10W YAGEO
R213	9JR5700000059	0.01		FOB	RST CHIP MAX 0R05 1/10W
R213	9JR5700000060	0.01		FOB	RST CHIPR 0 OHM +-5% 1/10W YAGEO
R215	9JR5700000091	0.01		FOB	RST CHIPR 2.2KOHM +-5% 1/10W YAGEO
R251	9JR5700000054	0.01		FOB	RST CHIP 4K7 1/16W 5%
R253	9JR5700000054	0.01		FOB	RST CHIP 4K7 1/16W 5%
R254	9JR5700000054	0.01		FOB	RST CHIP 4K7 1/16W 5%
R300	9JR5700000007	0.01		FOB	RST CHIP 390R 1/10W 1%
R300	9JR5700000102	0.01		FOB	RST CHIPR 390 OHM +-1% 1/10W YAGEO
R301	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R302	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R303	9JR5700000051	0.01		FOB	RST CHIP 33R 1/16W 5%
R304	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R306	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R307	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R314	9JR5700000054	0.01		FOB	RST CHIP 4K7 1/16W 5%
R316	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R318	9JR5700000038	0.01		FOB	RST CHIP 1K 1/16W 1%
R319	9JR5700000077	0.01		FOB	RST CHIPR 1 OHM +-5% 1/10W YAGEO
R320	9JR5700000054	0.01		FOB	RST CHIP 4K7 1/16W 5%
R322	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R323	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R328	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R329	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R330	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R331	9JR5700000109	0.01		FOB	RST CHIPR 4.7KOHM +-1% 1/10W YAGEO
R332	9JR5700000103	0.01		FOB	RST CHIPR 3.9KOHM +-1% 1/10W YAGEO
R350	9JR5700000100	0.01		FOB	RST CHIPR 33 OHM +-5% 1/10W YAGEO
R351	9JR5700000116	0.01		FOB	RST CHIPR 51 OHM +-5% 1/10W YAGEO

R352	9JR5700000100	0.01		FOB	RST CHIPR 33 OHM +-5% 1/10W YAGEO
R353	9JR5700000116	0.01		FOB	RST CHIPR 51 OHM +-5% 1/10W YAGEO
R354	9JR5700000116	0.01		FOB	RST CHIPR 51 OHM +-5% 1/10W YAGEO
R355	9JR5700000116	0.01		FOB	RST CHIPR 51 OHM +-5% 1/10W YAGEO
R356	9JR5700000116	0.01		FOB	RST CHIPR 51 OHM +-5% 1/10W YAGEO
R357	9JR5700000116	0.01		FOB	RST CHIPR 51 OHM +-5% 1/10W YAGEO
R358	9JR5700000065	0.01		FOB	RST CHIP 100R 1/10W 5%
R358	9JR5700000066	0.01		FOB	RST CHIPR 100 OHM +-5% 1/10W YAGEO
R359	9JR5700000065	0.01		FOB	RST CHIP 100R 1/10W 5%
R359	9JR5700000066	0.01		FOB	RST CHIPR 100 OHM +-5% 1/10W YAGEO
R360	9JR5700000059	0.01		FOB	RST CHIP MAX 0R05 1/10W
R360	9JR5700000060	0.01		FOB	RST CHIPR 0 OHM +-5% 1/10W YAGEO
R361	9JR5700000059	0.01		FOB	RST CHIP MAX 0R05 1/10W
R361	9JR5700000060	0.01		FOB	RST CHIPR 0 OHM +-5% 1/10W YAGEO
R362	9JR5700000059	0.01		FOB	RST CHIP MAX 0R05 1/10W
R362	9JR5700000060	0.01		FOB	RST CHIPR 0 OHM +-5% 1/10W YAGEO
R363	9JR5700000059	0.01		FOB	RST CHIP MAX 0R05 1/10W
R363	9JR5700000060	0.01		FOB	RST CHIPR 0 OHM +-5% 1/10W YAGEO
R402	9JR5700000112	0.01		FOB	RST CHIP 4K7 1/10W 5%
R402	9JR5700000113	0.01		FOB	RST CHIPR 4.7KOHM +-5% 1/10W YAGEO
R403	9JR5700000059	0.01		FOB	RST CHIP MAX 0R05 1/10W
R403	9JR5700000060	0.01		FOB	RST CHIPR 0 OHM +-5% 1/10W YAGEO
R404	9JR5700000065	0.01		FOB	RST CHIP 100R 1/10W 5%
R404	9JR5700000066	0.01		FOB	RST CHIPR 100 OHM +-5% 1/10W YAGEO
R408	9JR5700000065	0.01		FOB	RST CHIP 100R 1/10W 5%
R408	9JR5700000066	0.01		FOB	RST CHIPR 100 OHM +-5% 1/10W YAGEO
R409	9JR5700000065	0.01		FOB	RST CHIP 100R 1/10W 5%
R409	9JR5700000066	0.01		FOB	RST CHIPR 100 OHM +-5% 1/10W YAGEO
R410	9JR5700000065	0.01		FOB	RST CHIP 100R 1/10W 5%
R410	9JR5700000066	0.01		FOB	RST CHIPR 100 OHM +-5% 1/10W YAGEO
R411	9JR5700000065	0.01		FOB	RST CHIP 100R 1/10W 5%
R411	9JR5700000066	0.01		FOB	RST CHIPR 100 OHM +-5% 1/10W YAGEO
R414	9JR5700000065	0.01		FOB	RST CHIP 100R 1/10W 5%
R414	9JR5700000066	0.01		FOB	RST CHIPR 100 OHM +-5% 1/10W YAGEO
R415	9JR5700000112	0.01		FOB	RST CHIP 4K7 1/10W 5%
R415	9JR5700000113	0.01		FOB	RST CHIPR 4.7KOHM +-5% 1/10W YAGEO
R416	9JR5700000042	0.01		FOB	RST CHIP 10K 1/16W 5%
R416	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R417	9JR5700000042	0.01		FOB	RST CHIP 10K 1/16W 5%
R417	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R418	9JR5700000042	0.01		FOB	RST CHIP 10K 1/16W 5%
R418	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R419	9JR5700000042	0.01		FOB	RST CHIP 10K 1/16W 5%
R419	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R420	9JR5700000042	0.01		FOB	RST CHIP 10K 1/16W 5%
R420	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R421	9JR5700000069	0.01		FOB	RST CHIP 1K 1/10W 5%
R421	9JR5700000070	0.01		FOB	RST CHIPR 1KOHM +-5% 1/10W YAGEO
R422	9JR5700000103	0.01		FOB	RST CHIPR 3.9KOHM +-1% 1/10W YAGEO
R424	9JR5700000008	0.01		FOB	RST CHIP 3K9 1/10W 1%
R424	9JR5700000103	0.01		FOB	RST CHIPR 3.9KOHM +-1% 1/10W YAGEO
R426	9JR5700000002	0.01		FOB	RST CHIP 100R 1/10W 1%
R426	9JR5700000062	0.01		FOB	RST CHIPR 100 OHM +-1% 1/10W YAGEO
R427	9JR5700000042	0.01		FOB	RST CHIP 10K 1/16W 5%
R427	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R429	9JR5700000061	0.01		FOB	RST CHIPR 100 OHM +-1% 1/10W

R430	9JR5700000050	0.01		FOB	RST CHIP 33R 1/16W 5%
R430	9JR5700000051	0.01		FOB	RST CHIP 33R 1/16W 5%
R431	9JR5700000050	0.01		FOB	RST CHIP 33R 1/16W 5%
R431	9JR5700000051	0.01		FOB	RST CHIP 33R 1/16W 5%
R432	9JR5700000042	0.01		FOB	RST CHIP 10K 1/16W 5%
R432	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R433	9JR5700000042	0.01		FOB	RST CHIP 10K 1/16W 5%
R433	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R435	9JR5700000065	0.01		FOB	RST CHIP 100R 1/10W 5%
R435	9JR5700000066	0.01		FOB	RST CHIPR 100 OHM +-5% 1/10W YAGEO
R437	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R439	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R450	9JR5700000056	0.01		FOB	RST CHIP 5K1 1/16W 5%
R451	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R452	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R453	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R454	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R456	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R457	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R500	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R501	9JR5700000042	0.01		FOB	RST CHIP 10K 1/16W 5%
R501	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R502	9JR5700000042	0.01		FOB	RST CHIP 10K 1/16W 5%
R502	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R503	9JR5700000039	0.01		FOB	RST CHIP 100R 1/16W 5%
R503	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R504	9JR5700000042	0.01		FOB	RST CHIP 10K 1/16W 5%
R504	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R538	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R539	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R542	9JR5700000054	0.01		FOB	RST CHIP 4K7 1/16W 5%
R549	9JR5700000054	0.01		FOB	RST CHIP 4K7 1/16W 5%
R550	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R551	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R552	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R553	9JR5700000057	0.01		FOB	RST CHIP 68R 1/16W 5%
R554	9JR5700000057	0.01		FOB	RST CHIP 68R 1/16W 5%
R555	9JR5700000058	0.01		FOB	RST CHIP 75R 1/16W 5%
R556	9JR5700000058	0.01		FOB	RST CHIP 75R 1/16W 5%
R557	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R558	9JR5700000057	0.01		FOB	RST CHIP 68R 1/16W 5%
R559	9JR5700000057	0.01		FOB	RST CHIP 68R 1/16W 5%
R560	9JR5700000058	0.01		FOB	RST CHIP 75R 1/16W 5%
R561	9JR5700000058	0.01		FOB	RST CHIP 75R 1/16W 5%
R562	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R563	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R564	9JR5700000058	0.01		FOB	RST CHIP 75R 1/16W 5%
R565	9JR5700000058	0.01		FOB	RST CHIP 75R 1/16W 5%
R566	9JR5700000057	0.01		FOB	RST CHIP 68R 1/16W 5%
R567	9JR5700000057	0.01		FOB	RST CHIP 68R 1/16W 5%
R568	9JR5700000046	0.01		FOB	RST CHIP 20K 1/16W 5%
R569	9JR5700000046	0.01		FOB	RST CHIP 20K 1/16W 5%
R570	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R571	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R572	9JR5700000046	0.01		FOB	RST CHIP 20K 1/16W 5%
R573	9JR5700000046	0.01		FOB	RST CHIP 20K 1/16W 5%

R574	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R575	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R576	9JR5700000060	0.01		FOB	RST CHIPR 0 OHM +-5% 1/10W YAGEO
R577	9JR5700000060	0.01		FOB	RST CHIPR 0 OHM +-5% 1/10W YAGEO
R578	9JR5700000046	0.01		FOB	RST CHIP 20K 1/16W 5%
R579	9JR5700000058	0.01		FOB	RST CHIP 75R 1/16W 5%
R580	9JR5700000057	0.01		FOB	RST CHIP 68R 1/16W 5%
R581	9JR5700000058	0.01		FOB	RST CHIP 75R 1/16W 5%
R582	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R583	9JR5700000057	0.01		FOB	RST CHIP 68R 1/16W 5%
R584	9JR5700000058	0.01		FOB	RST CHIP 75R 1/16W 5%
R585	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R586	9JR5700000046	0.01		FOB	RST CHIP 20K 1/16W 5%
R587	9JR5700000057	0.01		FOB	RST CHIP 68R 1/16W 5%
R588	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R589	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R590	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R591	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R592	9JR5700000057	0.01		FOB	RST CHIP 68R 1/16W 5%
R593	9JR5700000045	0.01		FOB	RST CHIP 2K +-5% 1/16W
R594	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R595	9JR5700000045	0.01		FOB	RST CHIP 2K +-5% 1/16W
R596	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R597	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R598	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R599	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R600	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R601	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R602	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R607	9JR5700000042	0.01		FOB	RST CHIP 10K 1/16W 5%
R607	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R608	9JR5700000071	0.01		FOB	RST CHIP 10K 1/10W 5%
R608	9JR5700000072	0.01		FOB	RST CHIPR 10KOHM +-5% 1/10W YAGEO
R612	9JR5700000041	0.01		FOB	RST CHIP 1K 1/16W 5%
R616	9JR5700000041	0.01		FOB	RST CHIP 1K 1/16W 5%
R617	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R618	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R619	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R620	9JR5700000041	0.01		FOB	RST CHIP 1K 1/16W 5%
R621	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R625	9JR5700000160	0.01		FOB	RST CHIPR 10 OHM +-5% 1/4W YAGEO
R626	9JR5700000080	0.01		FOB	RST CHIPR 12KOHM +-1% 1/10W YAGEO
R627	9JR5700000089	0.01		FOB	RST CHIPR 22KOHM +-1% 1/10W YAGEO
R628	9JR5700000080	0.01		FOB	RST CHIPR 12KOHM +-1% 1/10W YAGEO
R629	9JR5700000165	0.01		FOB	RST CHIPR 22 OHM +-5% 1/4W YAGEO
R632	9JR5700000160	0.01		FOB	RST CHIPR 10 OHM +-5% 1/4W YAGEO
R633	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R634	9JR5700000046	0.01		FOB	RST CHIP 20K 1/16W 5%
R635	9JR5700000052	0.01		FOB	RST CHIP 39K 1/16W 5%
R637	9JR5700000160	0.01		FOB	RST CHIPR 10 OHM +-5% 1/4W YAGEO
R638	9JR5700000165	0.01		FOB	RST CHIPR 22 OHM +-5% 1/4W YAGEO
R639	9JR5700000080	0.01		FOB	RST CHIPR 12KOHM +-1% 1/10W YAGEO
R640	9JR5700000089	0.01		FOB	RST CHIPR 22KOHM +-1% 1/10W YAGEO
R641	9JR5700000080	0.01		FOB	RST CHIPR 12KOHM +-1% 1/10W YAGEO
R642	9JR5700000075	0.01		FOB	RST CHIP 1M 1/10W 5%
R642	9JR5700000076	0.01		FOB	RST CHIPR 1MOHM +-5% 1/10W YAGEO

R643	9JR5700000075	0.01		FOB	RST CHIP 1M 1/10W 5%
R643	9JR5700000076	0.01		FOB	RST CHIPR 1MOHM +-5% 1/10W YAGEO
R650	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R651	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R652	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R654	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R656	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R657	9JR5700000053	0.01		FOB	RST CHIP 47R 1/16W 5%
R658	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R660	9JR5700000046	0.01		FOB	RST CHIP 20K 1/16W 5%
R661	9JR5700000048	0.01		FOB	RST CHIP 27R 1/16W 5%
R663	9JR5700000046	0.01		FOB	RST CHIP 20K 1/16W 5%
R664	9JR5700000048	0.01		FOB	RST CHIP 27R 1/16W 5%
R666	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R667	9JR5700000053	0.01		FOB	RST CHIP 47R 1/16W 5%
R668	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R669	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R670	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R671	9JR5700000053	0.01		FOB	RST CHIP 47R 1/16W 5%
R673	9JR5700000048	0.01		FOB	RST CHIP 27R 1/16W 5%
R700	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R701	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R702	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R703	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R704	9JR5700000049	0.01		FOB	RST CHIP 27K 1/16W 5%
R706	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R707	9JR5700000037	0.01		FOB	RST CHIPR 0 OHM +-5% 1/16W YAGEO
R710	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R711	9JR5700000055	0.01		FOB	RST CHIP 47K 1/16W 5%
R712	9JR5700000055	0.01		FOB	RST CHIP 47K 1/16W 5%
R713	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R714	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R715	9JR5700000051	0.01		FOB	RST CHIP 33R 1/16W 5%
R717	9JR5700000044	0.01		FOB	RST CHIP 100K 1/16W 5%
R718	9JR5700000041	0.01		FOB	RST CHIP 1K 1/16W 5%
R720	9JR5700000054	0.01		FOB	RST CHIP 4K7 1/16W 5%
R721	9JR5700000041	0.01		FOB	RST CHIP 1K 1/16W 5%
R722	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R723	9JR5700000055	0.01		FOB	RST CHIP 47K 1/16W 5%
R724	9JR5700000055	0.01		FOB	RST CHIP 47K 1/16W 5%
R725	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R726	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R728	9JR5700000051	0.01		FOB	RST CHIP 33R 1/16W 5%
R729	9JR5700000044	0.01		FOB	RST CHIP 100K 1/16W 5%
R730	9JR5700000041	0.01		FOB	RST CHIP 1K 1/16W 5%
R732	9JR5700000041	0.01		FOB	RST CHIP 1K 1/16W 5%
R733	9JR5700000054	0.01		FOB	RST CHIP 4K7 1/16W 5%
R734	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R735	9JR5700000040	0.01		FOB	RST CHIP 100R 1/16W 5%
R736	9JR5700000044	0.01		FOB	RST CHIP 100K 1/16W 5%
R737	9JR5700000041	0.01		FOB	RST CHIP 1K 1/16W 5%
R738	9JR5700000041	0.01		FOB	RST CHIP 1K 1/16W 5%
R740	9JR5700000043	0.01		FOB	RST CHIP 10K 1/16W 5%
R741	9JR5700000055	0.01		FOB	RST CHIP 47K 1/16W 5%
R742	9JR5700000055	0.01		FOB	RST CHIP 47K 1/16W 5%
R743	9JR5700000051	0.01		FOB	RST CHIP 33R 1/16W 5%

R744	9JR5700000054	0.01		FOB	RST CHIP 4K7 1/16W 5%
R751	9JR5700000059	0.01		FOB	RST CHIP MAX 0R05 1/10W
R751	9JR5700000060	0.01		FOB	RST CHIPR 0 OHM +-5% 1/10W YAGEO
R756	9JR5700000112	0.01		FOB	RST CHIP 4K7 1/10W 5%
R756	9JR5700000113	0.01		FOB	RST CHIPR 4.7KOHM +-5% 1/10W YAGEO
R758	9JR5700000112	0.01		FOB	RST CHIP 4K7 1/10W 5%
R758	9JR5700000113	0.01		FOB	RST CHIPR 4.7KOHM +-5% 1/10W YAGEO
R759	9JR5700000112	0.01		FOB	RST CHIP 4K7 1/10W 5%
R759	9JR5700000113	0.01		FOB	RST CHIPR 4.7KOHM +-5% 1/10W YAGEO
R760	9JR5700000065	0.01		FOB	RST CHIP 100R 1/10W 5%
R760	9JR5700000066	0.01		FOB	RST CHIPR 100 OHM +-5% 1/10W YAGEO
R761	9JR5700000112	0.01		FOB	RST CHIP 4K7 1/10W 5%
R761	9JR5700000113	0.01		FOB	RST CHIPR 4.7KOHM +-5% 1/10W YAGEO
R764	9JR5700000086	0.01		FOB	RST CHIP 2K 1/10W 5%
R764	9JR5700000087	0.01		FOB	RST CHIPR 2KOHM +-5% 1/10W YAGEO
R765	9JR5700000071	0.01		FOB	RST CHIP 10K 1/10W 5%
R765	9JR5700000072	0.01		FOB	RST CHIPR 10KOHM +-5% 1/10W YAGEO
R767	9JR5700000054	0.01		FOB	RST CHIP 4K7 1/16W 5%
R769	9JR5700000054	0.01		FOB	RST CHIP 4K7 1/16W 5%
RP350	9JR5700000015	0.01		FOB	RST CHIP AR 8P4R 51 OHM +-5% 1/16W
RP351	9JR5700000015	0.01		FOB	RST CHIP AR 8P4R 51 OHM +-5% 1/16W
RP352	9JR5700000015	0.01		FOB	RST CHIP AR 8P4R 51 OHM +-5% 1/16W
RP353	9JR5700000015	0.01		FOB	RST CHIP AR 8P4R 51 OHM +-5% 1/16W
TH450	9JR5700000001	0.06		FOB	PTC CHIP 8V 0R4 KMC4S075RY
TU202	9JR9400000001	5.00		FOB	TUNER TDQU4-524A
U102	9JR5600000012	0.38		FOB	IC LP2996MRX PSOP-8
U103	9JR5600000013	0.36		FOB	IC L5985 VFQFPN8
U104	9JR5600000013	0.36		FOB	IC L5985 VFQFPN8
U150	9JR5600000001	0.06		FOB	IC AP1117E33L-13
U150	9JR5600000002	0.10		FOB	IC LD1117S33TR SOT-223
U152	9JR5600000001	0.06		FOB	IC AP1117E33L-13
U152	9JR5600000002	0.10		FOB	IC LD1117S33TR SOT-223
U153	9JR5600000010	0.11		FOB	IC LD1117DTTR DPAK(T&R)
U154	9JR5600000010	0.11		FOB	IC LD1117DTTR DPAK(T&R)
U302	9JR5600000022	0.08		FOB	IC MAX809STRG 2.93V SOT23-3
U351	9JR5600000016	1.42		FOB	IC HYB18TC256160BF-3S TFBGA-84-55
U351	9JR5600000017	1.33		FOB	IC NT5TU16M16AG-3C BGA84
U351	9JR5600000018	1.33		FOB	IC HYB18TC256160AF-3S TFBGA84
U352	9JR5600000016	1.42		FOB	IC HYB18TC256160BF-3S TFBGA-84-55
U352	9JR5600000017	1.33		FOB	IC NT5TU16M16AG-3C BGA84
U352	9JR5600000018	1.33		FOB	IC HYB18TC256160AF-3S TFBGA84
U400	9JR5600000009	19.50		FOB	IC MT5382AR BGA465
U550	9JR5600000025	0.07		FOB	IC M24C02-WDW6P TSSOP8
U600	9JR5600000019	0.65		FOB	IC TDA8933BTW HTSSOP32
U600	9JR5600000020	0.90		FOB	IC TDA8932BTW HTSSOP32
U700	9JR5600000025	0.07		FOB	IC M24C02-WDW6P TSSOP8
U701	9JR5600000025	0.07		FOB	IC M24C02-WDW6P TSSOP8
U702	9JR5600000023	0.19		FOB	IC RClamp0524P.TCT
U703	9JR5600000023	0.19		FOB	IC RClamp0524P.TCT
U704	9JR5600000023	0.19		FOB	IC RClamp0524P.TCT
U708	9JR5600000025	0.07		FOB	IC M24C02-WDW6P TSSOP8
U709	9JR5600000023	0.19		FOB	IC RClamp0524P.TCT
U710	9JR5600000023	0.19		FOB	IC RClamp0524P.TCT
U711	9JR5600000023	0.19		FOB	IC RClamp0524P.TCT
U712	9JR5600000014	0.35		FOB	IC LD39080PT-R PPAK
X300	9JR9300000009	0.13		FOB	CRYSTAL 60MHz 9P SMD-49

X300	9JR9300000010	0.12		FOB	CRYSTAL 60MHz 9P SMD-49
ZD100	9JR9300000025	0.05		FOB	DIODE 2A/40V SS2P4 DO-220AA
ZD101	9JR9300000025	0.05		FOB	DIODE 2A/40V SS2P4 DO-220AA
ZD551	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD552	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD553	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD554	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD555	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD556	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD557	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD558	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD559	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD560	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD561	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD562	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD563	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD564	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD565	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD566	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD567	9JR9300000015	0.01		FOB	UDZSNP5.6B ROHM
ZD702	9JR9300000016	0.01		FOB	DIODE PDZ24B SOD-323 PHILIPS
ZD703	9JR9300000016	0.01		FOB	DIODE PDZ24B SOD-323 PHILIPS
ZD704	9JR9300000016	0.01		FOB	DIODE PDZ24B SOD-323 PHILIPS
1054	**9JR990000001**	**POWER PCB ASSY**			
BD901	9JR9300000019	0.34		FOB	BRIDGE GBJ1508 15A/800V
C900	9JR6500000107	0.03		FOB	CER Y2 2200PF M 400VAC TDK
C900	9JR6500000108	0.03		FOB	Y1.CAP.0022UF 250V AC
C901	9JR6500000105	0.03		FOB	Y1 CAP 470pF +-10% 250VAC CD SERIES
C901	9JR6500000106	0.02		FOB	470PF +-10% 250VAC
C902	9JR6500000105	0.03		FOB	Y1 CAP 470pF +-10% 250VAC CD SERIES
C902	9JR6500000106	0.02		FOB	470PF +-10% 250VAC
C903	9JR6500000107	0.03		FOB	CER Y2 2200PF M 400VAC TDK
C903	9JR6500000108	0.03		FOB	Y1.CAP.0022UF 250V AC
C907	9JR6700000034	1.32		FOB	EC 220uF 450V LSG 35x30mm
C909	9JR6300000001	0.09		FOB	X2 CAP 0.68uF K 275VAC
C910	9JR6300000003	0.13		FOB	CAP MPP 100NF 630V 5%
C912	9JR6500000082	0.01		FOB	CAP CHIP 0805 2.2UF Z 16V Y5V
C913	9JR6500000065	0.01		FOB	CAP CHIP 0805 1NF K 50V X7R
C915	9JR6500000087	0.01		FOB	CAP CHIP 0805 470PF J 50V NPO
C916	9JR6500000085	0.01		FOB	CHIP 0.33UF +-10% 25V X7R 0805
C918	9JR6500000085	0.01		FOB	CHIP 0.33UF +-10% 25V X7R 0805
C920	9JR6500000085	0.01		FOB	CHIP 0.33UF +-10% 25V X7R 0805
C922	9JR6500000069	0.01		FOB	CAP CHIP 0805 100N 50V X7R +/-10%
C922	9JR6500000071	0.01		FOB	CAP CHIP 0805 0.1UF K 50V X7R
C923	9JR6500000085	0.01		FOB	CHIP 0.33UF +-10% 25V X7R 0805
C924	9JR6500000069	0.01		FOB	CAP CHIP 0805 100N 50V X7R +/-10%
C924	9JR6500000071	0.01		FOB	CAP CHIP 0805 0.1UF K 50V X7R
C925	9JR6500000063	0.01		FOB	CAP CHIP 0805 1NF J 50V NPO
C927	9JR6500000084	0.01		FOB	CAP CHIP 0805 3300PF K 50V X7R
C928	9JR6500000069	0.01		FOB	CAP CHIP 0805 100N 50V X7R +/-10%
C928	9JR6500000071	0.01		FOB	CAP CHIP 0805 0.1UF K 50V X7R
C929	9JR6500000005	0.02		FOB	C CAP. 330PF 1KV RR
C930	9JR6500000004	0.02		FOB	C CAP. 220PF 1KV
C931	9JR6500000004	0.02		FOB	C CAP. 220PF 1KV
C932	9JR6500000066	0.01		FOB	10NF/50V/0805/X7R

C932	9JR6500000068	0.01		FOB	CAP CHIP 0805 10NF K 50V X7R
C934	9JR6700000026	0.01		FOB	105# RADIAL E-CAPACTOR 47uF 25V
C935	9JR6300000004	0.24		FOB	CAP MPP 1.5uF 450V 5%
C936	9JR6700000026	0.01		FOB	105# RADIAL E-CAPACTOR 47uF 25V
C937	9JR6500000066	0.01		FOB	10NF/50V/0805/X7R
C939	9JR6500000069	0.01		FOB	CAP CHIP 0805 100N 50V X7R +/-10%
C940	9JR6400000002	0.03		FOB	F/C PPN 10N 100V 5%
C941	9JR6500000085	0.01		FOB	CHIP 0.33UF +-10% 25V X7R 0805
C942	9JR6500000066	0.01		FOB	10NF/50V/0805/X7R
C945	9JR6500000109	0.04		FOB	C CAP. 1500PF 500V 10% RC
C951	9JR6700000036	0.14		FOB	EC 1000uF 35V GF 13x25mm
C951	9JR6700000037	0.15		FOB	EC CAP 1000UF 35V 12.5*25mm
C952	9JR6700000036	0.14		FOB	EC 1000uF 35V GF 13x25mm
C952	9JR6700000037	0.15		FOB	EC CAP 1000UF 35V 12.5*25mm
C955	9JR6700000043	0.09		FOB	EC 2200uF 10V GF222M010I200K040P 13*20mm
C956	9JR6700000038	0.08		FOB	EC 1500UF 16V GF 13*20mm
C959	9JR6700000005	0.01		FOB	EC 10UF/50V KM 5*11mm
C959	9JR6700000006	0.01		FOB	EC 10uF 50V RGA 5x11 mm
C966	9JR6700000005	0.01		FOB	EC 10UF/50V KM 5*11mm
C966	9JR6700000006	0.01		FOB	EC 10uF 50V RGA 5x11 mm
C967	9JR6700000020	0.02		FOB	EC 100uF 50V KM 8x11.5mm
C968	9JR6500000069	0.01		FOB	CAP CHIP 0805 100N 50V X7R +/-10%
C968	9JR6500000071	0.01		FOB	CAP CHIP 0805 0.1UF K 50V X7R
C969	9JR6700000024	0.01		FOB	EC 33uF 50V KM 6.3x11mm
C969	9JR6700000025	0.01		FOB	EC 33uF 50V PF 6.3x11mm
CN901	9JR8700000001	0.18		FOB	AC SOCKET 3PIN + 2 SCREW Hole V/T
CN901	9JR8700000002	0.20		FOB	AC SOCKET V 3P ST-01DR-BBBS-3000
CN902	9JR3300000010	0.02		FOB	WAFER & Plug 12PIN
CN903	9JR3300000012	0.02		FOB	WAFER & Plug 13PIN
CN903	9JR3300000013	0.05		FOB	WAFER 2.5MM 13P 64843
CN905	9JR3300000012	0.02		FOB	WAFER & Plug 13PIN
CN905	9JR3300000013	0.05		FOB	WAFER 2.5MM 13P 64843
D901	9JR9300000021	0.28		FOB	STPS20H100CFP
D902	9JR9300000021	0.28		FOB	STPS20H100CFP
D903	9JR9300000020	0.21		FOB	DIODE FMN-1106S 10A/600V TO-220
D908	9JR9300000026	0.03		FOB	RGP10D
D908	9JR9300000028	0.02		FOB	DIODE RGP10D DO-41
D908	9JR9300000031	0.01		FOB	RGP10D
D924	9JR9300000032	0.03		FOB	DIODE UG1006 1A 800V DO-41
D927	9JR9300000023	0.13		FOB	DIODE 40V/10A SBF1040CT ITO-220AB
D927	9JR9300000024	0.16		FOB	DIODE 40V/10A SRF1040 ITO-220AB
D928	9JR9300000023	0.13		FOB	DIODE 40V/10A SBF1040CT ITO-220AB
D928	9JR9300000024	0.16		FOB	DIODE 40V/10A SRF1040 ITO-220AB
D930	9JR9300000027	0.01		FOB	DIODE BAV21 PHILIPS
D931	9JR9300000027	0.01		FOB	DIODE BAV21 PHILIPS
D932	9JR9300000027	0.01		FOB	DIODE BAV21 PHILIPS
D936	9JR9300000026	0.03		FOB	RGP10D
D936	9JR9300000028	0.02		FOB	DIODE RGP10D DO-41
D936	9JR9300000031	0.01		FOB	RGP10D
D937	9JR9300000026	0.03		FOB	RGP10D
D937	9JR9300000028	0.02		FOB	DIODE RGP10D DO-41
D937	9JR9300000031	0.01		FOB	RGP10D
D938	9JR9300000026	0.03		FOB	RGP10D
D938	9JR9300000028	0.02		FOB	DIODE RGP10D DO-41
D938	9JR9300000031	0.01		FOB	RGP10D
F901	9JR8400000002	0.05		FOB	FUSE 6.3A 250V,Time Lag Fuse

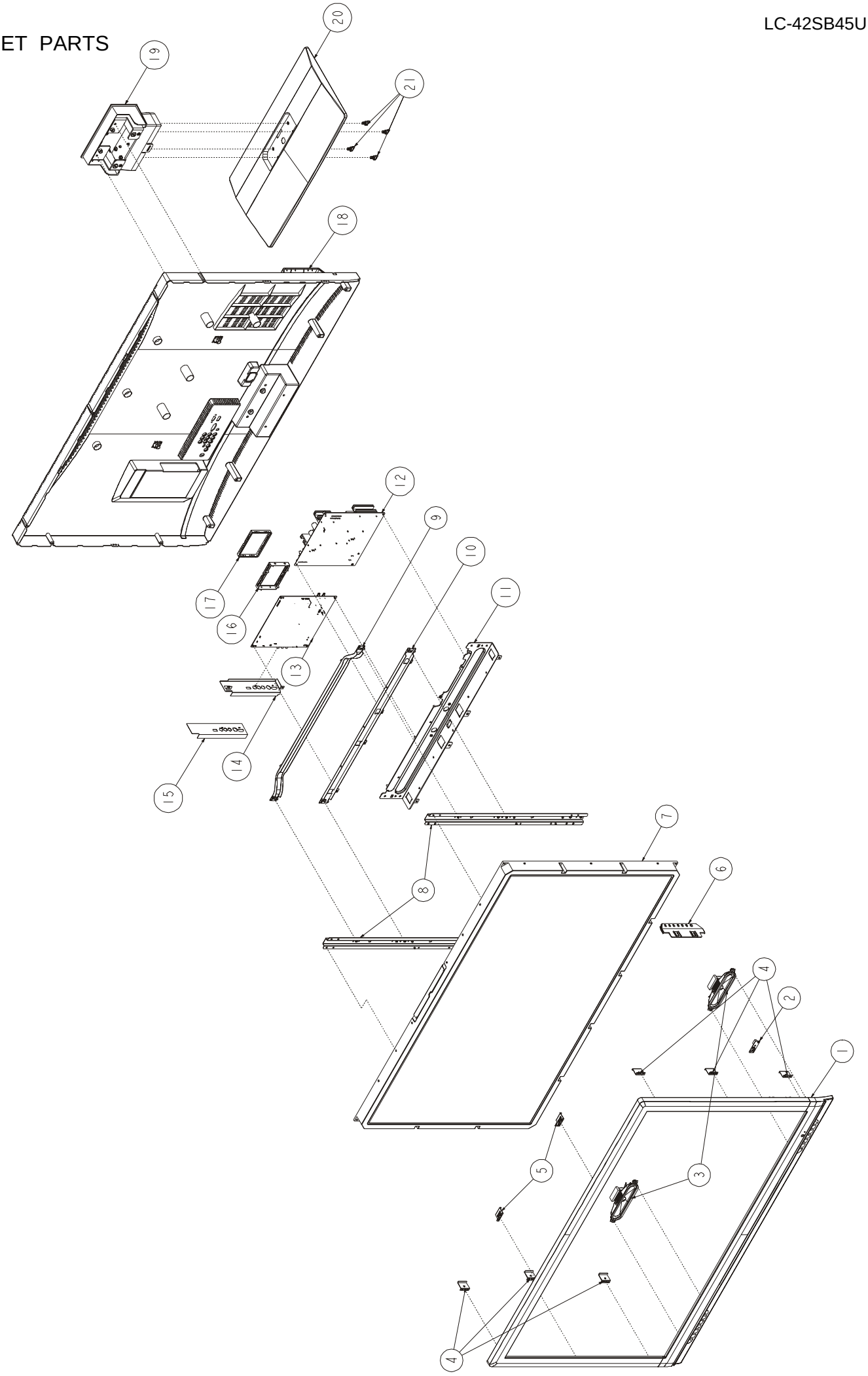
FB903	9JR7100000004	0.01		FOB	FERRITE BEAD
FB904	9JR7100000004	0.01		FOB	FERRITE BEAD
FB922	9JR7100000006	0.06		FOB	FERRITE CORE 510R C8B R6H 6x9.2(A)
FB923	9JR7100000006	0.06		FOB	FERRITE CORE 510R C8B R6H 6x9.2(A)
HBD901	9JR9000000001	0.22		FOB	HEAT SINK
HD901	9JR9000000002	0.13		FOB	HEAT SINK
HD903	9JR9000000003	0.05		FOB	HEATSINK(10*18*20)
HD927	9JR9000000003	0.05		FOB	HEATSINK(10*18*20)
HD928	9JR9000000003	0.05		FOB	HEATSINK(10*18*20)
HQ902	9JR9000000004	0.26		FOB	HEAT SINK
HQ919	9JR9000000005	0.12		FOB	HEAT SINK
IC901	9JR5600000024	0.78		FOB	IC RESONANT L6599DTR SO-16N ST
IC902	9JR5600000008	0.24		FOB	IC SG6961
IC903	9JR5600000015	0.44		FOB	IC TNY277PN DIP-8C
IC909	9JR5600000003	0.06		FOB	IC PC123Y82FZ0F
IC910	9JR5600000003	0.06		FOB	IC PC123Y82FZ0F
IC911	9JR5600000003	0.06		FOB	IC PC123Y82FZ0F
J901	9JR9500000001	0.03		FOB	JUMP WIRE
J902	9JR9500000001	0.03		FOB	JUMP WIRE
J903	9JR9500000001	0.03		FOB	JUMP WIRE
J904	9JR9500000001	0.03		FOB	JUMP WIRE
J905	9JR9500000001	0.03		FOB	JUMP WIRE
J906	9JR9500000001	0.03		FOB	JUMP WIRE
J907	9JR9500000001	0.03		FOB	JUMP WIRE
J908	9JR9500000001	0.03		FOB	JUMP WIRE
J909	9JR9500000001	0.03		FOB	JUMP WIRE
J910	9JR9500000001	0.03		FOB	JUMP WIRE
J911	9JR9500000001	0.03		FOB	JUMP WIRE
J912	9JR9500000001	0.03		FOB	JUMP WIRE
J913	9JR9500000001	0.03		FOB	JUMP WIRE
J914	9JR9500000001	0.03		FOB	JUMP WIRE
J915	9JR9500000001	0.03		FOB	JUMP WIRE
J916	9JR9500000001	0.03		FOB	JUMP WIRE
J918	9JR9500000001	0.03		FOB	JUMP WIRE
J919	9JR9500000001	0.03		FOB	JUMP WIRE
J920	9JR9500000001	0.03		FOB	JUMP WIRE
J921	9JR9500000001	0.03		FOB	JUMP WIRE
J922	9JR9500000001	0.03		FOB	JUMP WIRE
J923	9JR9500000001	0.03		FOB	JUMP WIRE
J925	9JR9500000001	0.03		FOB	JUMP WIRE
J926	9JR9500000001	0.03		FOB	JUMP WIRE
J927	9JR9500000001	0.03		FOB	JUMP WIRE
J928	9JR5700000156	0.01		FOB	RST CHIPR 0 OHM +-5% 1/4W
L901	9JR7300000009	0.60		FOB	LINE FILTER 11mH 3.5A FPH6001AL
L902	9JR7300000011	0.66		FOB	LINE FILTER 8mH 4.0A LF-006013-4
L902	9JR7300000010	0.66		FOB	LINE FILTER 8mH 4.0A HJC-S6027
L903	9JR8000000001	1.35		FOB	XFMR 270uH QPH7005AL
L906	9JR7300000018	0.10		FOB	CHOKE COIL 2.4uH+/-20% 4.5mohm R5*20
L906	9JR7300000017	0.10		FOB	CHOKE COIL 2.4uH+/-20% 4.5mohm R5*20
L906	9JR7300000023	0.08		FOB	CHOKE COIL 2.4uH+/-20% 8.0A LB2R4 HA
L907	9JR7300000016	0.06		FOB	CHOKE COIL 2.3uH+/-20% 7.2mohm R4*15
L907	9JR7300000015	0.07		FOB	CHOKE COIL 2.3uH+/-20% 7.2mohm R4*15
L907	9JR7300000022	0.04		FOB	CHOKE COIL 2.3uH+/-20% 5.0A LB2R3 HA
L908	9JR7300000012	0.05		FOB	CHOKE COIL
L908	9JR7300000013	0.05		FOB	CHOKE BY LI TA
L909	9JR7300000016	0.06		FOB	CHOKE COIL 2.3uH+/-20% 7.2mohm R4*15

L909	9JR7300000015	0.07		FOB	CHOKE COIL 2.3uH+/-20% 7.2mohm R4*15
L909	9JR7300000022	0.04		FOB	CHOKE COIL 2.3uH+/-20% 5.0A LB2R3 HA
Q902	9JR5700000015	1.17		FOB	TRA STW21NM60N 17A/650V TO-247
Q915	9JR5700000005	0.01		FOB	BC847C
Q915	9JR5700000011	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q916	9JR5700000005	0.01		FOB	BC847C
Q916	9JR5700000011	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q917	9JR5700000005	0.01		FOB	BC847C
Q917	9JR5700000011	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q918	9JR5700000005	0.01		FOB	BC847C
Q918	9JR5700000011	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q919	9JR5700000013	0.34		FOB	FET 2SK4097LS 9.5A/500V TO-220FI(LS)
Q919	9JR5700000016	0.44		FOB	MOSFET 9A/500V STF10NK50Z TO-220FP
Q920	9JR5700000013	0.34		FOB	FET 2SK4097LS 9.5A/500V TO-220FI(LS)
Q920	9JR5700000016	0.44		FOB	MOSFET 9A/500V STF10NK50Z TO-220FP
Q922	9JR5700000008	0.01		FOB	TRA BC327 800mA/45V TO-92
Q923	9JR5700000006	0.01		FOB	BC857C
Q924	9JR5700000006	0.01		FOB	BC857C
R913	9JR5700000145	0.01		FOB	RST CHIPR 33 KOHM +-5% 1/8W
R915	9JR5700000152	0.01		FOB	RST CHIPR 47KOHM +-5% 1/8W YAGEO
R916	9JR5700000136	0.01		FOB	RST CHIPR 15KOHM +-5% 1/8W YAGEO
R917	9JR5700000023	0.01		FOB	12KOHM 5% 1/6W
R917	9JR5700000024	0.01		FOB	RST CFR 12K 1/6W 5%
R918	9JR5700000155	0.01		FOB	RST CHIPR 68 KOHM +-5% 1/8W
R919	9JR5700000127	0.01		FOB	RST CHIPR 10 KOHM +-5% 1/8W
R920	9JR5700000019	0.01		FOB	CFR 10KOHM +-5% 1/6W
R920	9JR5700000020	0.01		FOB	RST CFR 10K 1/6W 5%
R921	9JR5700000026	0.01		FOB	RST CFR 2M2 1/6W 5%
R924	9JR5700000014	0.01		FOB	RST MOF 0R18 5% 1W
R926	9JR5700000014	0.01		FOB	RST MOF 0R18 5% 1W
R928	9JR5700000027	0.01		FOB	2.7KOHM 5% 1/6W
R928	9JR5700000028	0.01		FOB	RST CFR 2K7 1/6W 5%
R929	9JR5700000151	0.01		FOB	RST CHIPR 47 KOHM +-5% 1/8W
R930	9JR5700000168	0.01		FOB	RST CHIPR 4.7 KOHM +-5% 1/4W
R932	9JR5700000029	0.01		FOB	330 OHM +-5% 1/6W
R932	9JR5700000030	0.01		FOB	RST CFR 330R 1/6W 5%
R936	9JR5700000128	0.01		FOB	RST CHIPR 100 KOHM +-5% 1/8W
R937	9JR5700000140	0.01		FOB	RST CHIPR 2.2KOHM +-1% 1/8W
R938	9JR5700000150	0.01		FOB	RST CHIPR 4.7 KOHM +-5% 1/8W
R939	9JR5700000138	0.01		FOB	RST CHIPR 18 KOHM +-1% 1/8W
R940	9JR5700000133	0.01		FOB	RST CHIPR 1.5 KOHM +-1% 1/8W
R941	9JR5700000134	0.01		FOB	RST CHIPR 15 KOHM +-1% 1/8W
R943	9JR5700000033	0.01		FOB	470OHM +-5% 1/6W
R943	9JR5700000034	0.01		FOB	RST CFR 470R 1/6W 5%
R944	9JR5700000125	0.01		FOB	RST CHIPR 10 KOHM +-1% 1/8W
R945	9JR5700000137	0.01		FOB	RST CHIPR 1K8 OHM +-1% 1/8W
R946	9JR5700000019	0.01		FOB	CFR 10KOHM +-5% 1/6W
R946	9JR5700000020	0.01		FOB	RST CFR 10K 1/6W 5%
R947	9JR5700000148	0.01		FOB	RST CHIPR 39 KOHM +-1% 1/8W
R949	9JR5700000144	0.01		FOB	RST CHIPR 3.3 KOHM +-5% 1/8W
R952	9JR5700000139	0.01		FOB	RST CHIPR 22 OHM +-5% 1/8W
R953	9JR5700000128	0.01		FOB	RST CHIPR 100 KOHM +-5% 1/8W
R954	9JR5700000134	0.01		FOB	RST CHIPR 15 KOHM +-1% 1/8W
R955	9JR5700000031	0.01		FOB	3.3K OHM 5%*
R955	9JR5700000032	0.01		FOB	RST CFR 3K3 1/6W 5%
R956	9JR5700000153	0.01		FOB	RST CHIP 68R 1/8W 5%

R957	9JR5700000153	0.01		FOB	RST CHIP 68R 1/8W 5%
R958	9JR5700000135	0.01		FOB	RST CHIPR 15 KOHM +-5% 1/8W
R959	9JR5700000163	0.01		FOB	RST CHIPR 120KOHM +-5% 1/4W YAGEO
R960	9JR5700000163	0.01		FOB	RST CHIPR 120KOHM +-5% 1/4W YAGEO
R961	9JR5700000162	0.01		FOB	RST CHIPR 120 KOHM +-5% 1/4W
R962	9JR5700000142	0.01		FOB	RST CHIPR 24 KOHM +-5% 1/8W
R963	9JR5700000128	0.01		FOB	RST CHIPR 100 KOHM +-5% 1/8W
R965	9JR5700000167	0.01		FOB	RST CHIPR 470 OHM +-5% 1/4W
R966	9JR5700000141	0.01		FOB	RST CHIPR 2.2 KOHM +-5% 1/8W
R967	9JR5700000129	0.01		FOB	RST CHIPR 1 MOHM +-5% 1/8W
R968	9JR5700000167	0.01		FOB	RST CHIPR 470 OHM +-5% 1/4W
R969	9JR5700000161	0.01		FOB	RST CHIPR 1 MOHM +-1% 1/4W
R970	9JR5700000161	0.01		FOB	RST CHIPR 1 MOHM +-1% 1/4W
R971	9JR5700000161	0.01		FOB	RST CHIPR 1 MOHM +-1% 1/4W
R972	9JR5700000138	0.01		FOB	RST CHIPR 18 KOHM +-1% 1/8W
R973	9JR5700000154	0.01		FOB	RST CHIP 680R 1/8W 1%
R974	9JR5700000166	0.01		FOB	RST CHIPR 2.2 MOHM +-5% 1/4W
R975	9JR5700000166	0.01		FOB	RST CHIPR 2.2 MOHM +-5% 1/4W
R976	9JR5700000164	0.01		FOB	RST CHIPR 22 OHM +-5% 1/4W
R977	9JR5700000166	0.01		FOB	RST CHIPR 2.2 MOHM +-5% 1/4W
R978	9JR5700000132	0.01		FOB	RST CHIPR 120 KOHM +-5% 1/8W
R979	9JR5700000147	0.01		FOB	RST CHIPR 360 OHM +-5% 1/8W
R980	9JR5700000146	0.01		FOB	RST CHIPR 330 KOHM +-5% 1/8W
R982	9JR5700000126	0.01		FOB	RST CHIPR 100 OHM +-5% 1/8W
R983	9JR5700000124	0.01		FOB	RST CHIPR 10 OHM +-5% 1/8W
R984	9JR5700000143	0.01		FOB	RST CHIPR 330 OHM +-5% 1/8W YAGEO
R985	9JR5700000035	0.01		FOB	4.7K OHM 5% 1/6W
R985	9JR5700000036	0.01		FOB	RST CFR 4K7 1/6W 5%
R986	9JR5700000127	0.01		FOB	RST CHIPR 10 KOHM +-5% 1/8W
R987	9JR5700000021	0.01		FOB	CFR 100KOHM +-5% 1/6W
R987	9JR5700000022	0.01		FOB	RST CFR 100K 1/6W 5%
R988	9JR5700000150	0.01		FOB	RST CHIPR 4.7 KOHM +-5% 1/8W
R989	9JR5700000035	0.01		FOB	4.7K OHM 5% 1/6W
R989	9JR5700000036	0.01		FOB	RST CFR 4K7 1/6W 5%
R990	9JR5700000150	0.01		FOB	RST CHIPR 4.7 KOHM +-5% 1/8W
R991	9JR5700000149	0.01		FOB	RST CHIPR 47 OHM +-5% 1/8W
RV902	9JR5700000016	0.08		FOB	VARISTOR 510V TVR14511KFC4FY
RV904	9JR5700000016	0.08		FOB	VARISTOR 510V TVR14511KFC4FY
RV905	9JR5700000016	0.08		FOB	VARISTOR 510V TVR14511KFC4FY
SG1	9JR6200000001	0.05		FOB	SPARK GAP 200V GS41-201MA
SG2	9JR6200000001	0.05		FOB	SPARK GAP 200V GS41-201MA
SG3	9JR6200000001	0.05		FOB	SPARK GAP 200V GS41-201MA
SG4	9JR6200000001	0.05		FOB	SPARK GAP 200V GS41-201MA
T904	9JR8000000003	0.39		FOB	XFMR 950uH PT-009601-3
T904	9JR8000000004	0.53		FOB	XFMR 970uH PPH7019AL
T905	9JR8000000005	2.90		FOB	XFMR 2.5mH PT-009983
T905	9JR8000000006	2.68		FOB	XFMR 2.5mH HJC-S7100
TH901	9JR5700000018	0.05		FOB	NTC 0R75 15% SCK100R75MSY001 BY THINKING
ZD910	9JR9300000012	0.01		FOB	DIODE BZX79-C15 DO-35
ZD911	9JR9300000011	0.05		FOB	TVS P6KE160A DO-15
ZD911	9JR9300000013	0.06		FOB	DIODE P6KE160A DO-15
ZD911	9JR9300000014	0.05		FOB	DIODE P6KE160A DO-15
ZD912	9JR9300000002	0.01		FOB	DIO REG BZX79-C5V1 A (PHSE) A
ZD913	9JR9300000004	0.01		FOB	DIODE BZX79-C9V1 DO-35
ZD914	9JR9300000017	0.01		FOB	DIODE BZX84-C20 SOT-23
ZD915	9JR9300000017	0.01		FOB	DIODE BZX84-C20 SOT-23

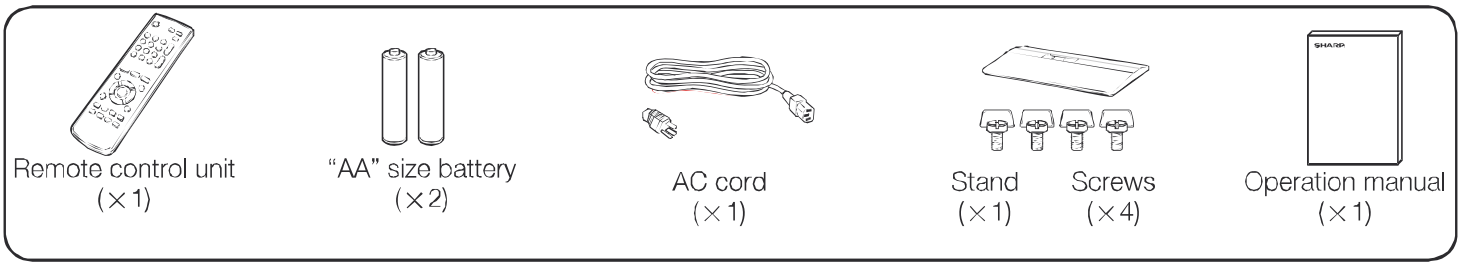
ZD916	9JR9300000017	0.01		FOB	DIODE BZX84-C20 SOT-23
1056	**9JR990000003**	**IR PCB ASSY**			
C001	9JR6500000047	0.01		FOB	CAP CHIP 0603 1U 10V Y5V -20%+80%
C002	9JR6500000033	0.01		FOB	CAP CHIP 0603 10N 50V Y5V -20%+80%
C004	9JR6500000039	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C004	9JR6500000040	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
CN001	9JR3300000015	0.16		FOB	WAFER SMD 1.5MM 5P 66125
LED001	9JR8100000001	0.10		FOB	LED SM KPB-3025SURKCGKC
Q001	9JR5700000005	0.01		FOB	BC847C
Q001	9JR5700000011	0.01		FOB	TRA BC847C 100mA/50V SOT-23
Q002	9JR5700000005	0.01		FOB	BC847C
Q002	9JR5700000011	0.01		FOB	TRA BC847C 100mA/50V SOT-23
R001	9JR5700000111	0.01		FOB	RST CHIPR 470 OHM +-5% 1/10W YAGEO
R002	9JR5700000111	0.01		FOB	RST CHIPR 470 OHM +-5% 1/10W YAGEO
R004	9JR5700000093	0.01		FOB	RST CHIPR 2.2KOHM +-5% 1/10W YAGEO
R006	9JR5700000093	0.01		FOB	RST CHIPR 2.2KOHM +-5% 1/10W YAGEO
R007	9JR5700000097	0.01		FOB	RST CHIP 2K7 1/10W 5%
R007	9JR5700000098	0.01		FOB	RST CHIPR 2.7KOHM +-5% 1/10W YAGEO
R008	9JR5700000067	0.01		FOB	RST CHIP 100R 1/10W 5%
R008	9JR5700000068	0.01		FOB	RST CHIPR 100 OHM +-5% 1/10W YAGEO
U001	9JR5600000021	0.31		FOB	IC TSOP34438ST1
1057	**9JR990000004**	**KEY PCB ASSY**			
C016	9JR6500000039	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C016	9JR6500000040	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C017	9JR6500000039	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C017	9JR6500000040	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
C024	9JR6500000039	0.01		FOB	CAP CHIP 0603 100N 50V Y5V -20%+80%
C024	9JR6500000040	0.01		FOB	CAP CHIP 0603 0.1UF Z 50V Y5V
CN016	9JR3300000009	0.01		FOB	WAFER 4P RIGHT ANGLE PITCH 2.0
CN016	9JR3300000008	0.01		FOB	CONNECTOR
R016	9JR5700000105	0.01		FOB	RST CHIPR 4.3KOHM +-5% 1/10W YAGEO
R017	9JR5700000105	0.01		FOB	RST CHIPR 4.3KOHM +-5% 1/10W YAGEO
R018	9JR5700000082	0.01		FOB	RST CHIPR 1.8KOHM +-5% 1/10W YAGEO
R019	9JR5700000082	0.01		FOB	RST CHIPR 1.8KOHM +-5% 1/10W YAGEO
R020	9JR5700000111	0.01		FOB	RST CHIPR 470 OHM +-5% 1/10W YAGEO
R021	9JR5700000122	0.01		FOB	RST CHIPR 8.2KOHM +-5% 1/10W YAGEO
SW016	9JR7700000001	0.02		FOB	TACT SWITCH TSPB-2 -NP
SW016	9JR7700000002	0.02		FOB	TACT SW H=5 GY 180g SFKHHPM25C0-PL
SW017	9JR7700000001	0.02		FOB	TACT SWITCH TSPB-2 -NP
SW017	9JR7700000002	0.02		FOB	TACT SW H=5 GY 180g SFKHHPM25C0-PL
SW018	9JR7700000001	0.02		FOB	TACT SWITCH TSPB-2 -NP
SW018	9JR7700000002	0.02		FOB	TACT SW H=5 GY 180g SFKHHPM25C0-PL
SW019	9JR7700000001	0.02		FOB	TACT SWITCH TSPB-2 -NP
SW019	9JR7700000002	0.02		FOB	TACT SW H=5 GY 180g SFKHHPM25C0-PL
SW020	9JR7700000001	0.02		FOB	TACT SWITCH TSPB-2 -NP
SW020	9JR7700000002	0.02		FOB	TACT SW H=5 GY 180g SFKHHPM25C0-PL
SW021	9JR7700000001	0.02		FOB	TACT SWITCH TSPB-2 -NP
SW021	9JR7700000002	0.02		FOB	TACT SW H=5 GY 180g SFKHHPM25C0-PL
SW022	9JR7700000001	0.02		FOB	TACT SWITCH TSPB-2 -NP
SW022	9JR7700000002	0.02		FOB	TACT SW H=5 GY 180g SFKHHPM25C0-PL

[2] CABINET PARTS

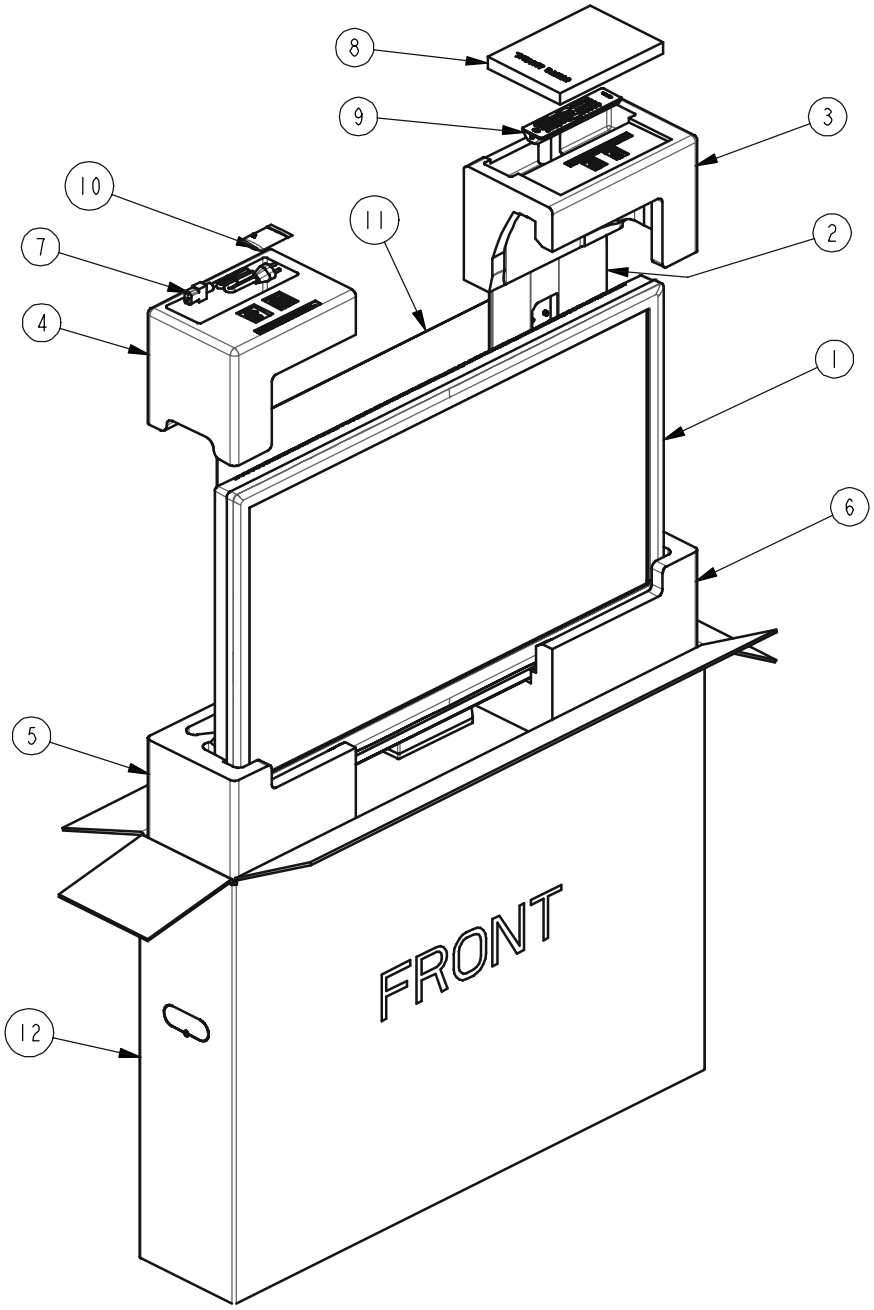


Item	SHARP code	Description
1	9JR7050000002	BEZEL ASSY
2	9JR9900000003	IR PCB ASSY
3	9JR7800000001	SPEAKER 6OHM 10W 156mmx30mm
4	9JR1500000007	FIX BKT FOR AUO SIDE
5	9JR1500000011	BRACKET_METAL
6	9JR7050000001	KEY PAD ASSY
7	9JR7500000001	PANEL V420H1-L13 C1 TW CMO
8	9JR1500000005	PANEL BKT
9	9JR1500000006	VESA Bracket
10	9JR1500000008	BRACKET_PCB
11	9JR1500000009	BRACKET_STAND
12	9JR9900000001	POWER PCB ASSY
13	9JR9900000002	MAIN PCB ASSY (CMO)
14	9JR1500000010	BRACKET_SIDE
15	9JR4000000007	LABEL_SIDE_IO
18	9JR7050000003	REAR COVER ASSY
19	9JR7050000005	BASE STAND ASSY
20	9JR7050000004	BASE ASSY
21	9JR0100000005	SCREW_PH M6-1.0¡Á15

[3]SUPPLIED ACCESSORIES



[4]PACKING PARTS



Item	Parts Code	Description
1		Set BODY
2	9JR7050000004	BASE ASSY
3.4.5.6	9JR7050000010	CUSHION ASSY
7	9JR8900000001	Power cord
8	9JR4100000001	OPERATION MANUAL
9	9JR9800000001	Remote control
10	9JR0100000015	SCREW_PH M6-1.0¡Á15
11	9JR4500000003	P.E. BAG(100 X 70)
12	9JR4400000009	CARTON

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SHARP

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